

EALDORMERE

ARCHERY

HANDBOOK

Table of Contents

Table of Contents	i
SECTION 1: ACKNOWLEDGEMENTS AND INTRODUCTION	1-1
SECTION 2: GLOSSARY OF TERMS	2-1
SECTION 3: EQUIPMENT.....	3-1
BOWS	3-1
Selecting a bow:.....	3-2
Care of your bow	3-4
STRINGS	3-4
ARROWS & BOLTS	3-5
ACCESSORIES	3-6
Shooting Gloves / Fingertabs.....	3-6
Armguards	3-7
Quivers.....	3-7
Bowstringers	3-8
Repair equipment.....	3-8
Bow sling.....	3-9
Clothing / Jewellery	3-9
SECTION 4: RANGE SAFETY & ETIQUETTE.....	4-1
EALDORMERE ARCHERY - RULES OF THE LINE	4-1
SECTION 5: BASIC SHOOTING TECHNIQUE.....	5-1
Bow stringers.....	5-2
Physical conditioning.....	5-2
SECTION 6: MARSHALLING.....	6-1
GENERAL MARSHALLING DUTIES	6-1
MARSHAL POSITIONS AND RESPONSIBILITIES	6-1
Marshal-in-Charge.....	6-1

Marshal-at-Large	6-2
Group Marshals for Shires or Baronies	6-3
Archer General (Kingdom Archery Marshal)	6-3
BECOMING A MARSHAL	6-4
SECTION 7: INSPECTION PROCEDURE	7-1
EQUIPMENT INSPECTION	7-1
Longbows, recurves and other straight bows	7-1
Arrows	7-3
Crossbows.....	7-3
Bolts.....	7-4
AFTER INSPECTION	7-5
LEGAL EALDORMERE ARCHERY EQUIPMENT	7-5
Recurve or straight bows	7-5
Crossbows.....	7-6
Arrows	7-6
Bolts.....	7-7
Unusual equipment	7-7
SECTION 8: SETTING UP A RANGE.....	8-1
SECTION 9: RUNNING A LINE	9-1
ARCHERS WITH PHYSICAL DISABILITIES.....	9-2
UNUSUAL CIRCUMSTANCES.....	9-2
Inclement weather.....	9-2
SECTION 10: REPORTS	10-1
SCORE REPORTS.....	10-1
EVENT REPORTS	10-1
SEMI-ANNUAL REPORTS.....	10-1
SECTION 11: TYPES OF SHOOTS	11-1
ROYAL ROUND.....	11-1

IKAC (INTER-KINGDOM ARCHERY COMPETITION).....	11-1
WINTER ARCHERY SHOOT	11-2
ADVANCING SOLDIER SHOOT	11-2
CLOUT SHOOT	11-2
CASTLE WINDOW	11-3
NOVELTY SHOTS.....	11-3
SECTION 12: SOURCES	12-1
BOOKS	12-1
MAGAZINE ARTICLES.....	12-3
VIDEOS	12-3
ARCHERY PERIODICALS	12-3
WEB SITES	12-4
LISTSERVS	12-5
NON-SCA ARCHERY ASSOCIATIONS.....	12-5
ARCHERY SUPPLIERS	12-6
UK Suppliers	12-7
Ealdormere Archery Event Report	F1
Ealdormere Archery Marshal Application Form	F2
Royal Round Score Sheet	F3

SECTION 1: ACKNOWLEDGEMENTS AND INTRODUCTION

This handbook is largely based on the archery handbook of the Middle Kingdom with modifications and additions by the editor. The editor would therefore like to thank all those who contributed to the Midrealm Archery Handbook and in particular Foresters Arwenna of Kelsley, Neko Me and Nigel FitzMaurice de Caeranor.

The editor would like to thank the following Ealdormereans who contributed to this handbook: Wilfred of Sweflingham, Jhone of Wodecott, Geoffrey Guiscard, Aelfric the Kestrell, Etaoin O’Fearghail, Alexander Fraser, Padrig McNeil and Ulvar Van Der Nederlanden,.

This handbook is intended as a guide for archers and archery marshals in Ealdormere. It is not intended to be all-inclusive but rather a compilation of the minimum knowledge required by archery marshals and a starting point for novice archers. The sections on sources and history of archery are not required knowledge for marshals. For those who wish to pursue a specific area of interest it is recommended that they consult the sources section. Please note that no recommendation of any source is implied by its inclusion in this handbook.

It should be noted that archery by nature may be dangerous and that the information in this handbook should in no way override manufacturer’s equipment recommendations or take the place of the common sense of the participants.

It is recommended that readers first peruse the glossary to familiarize themselves with the terms used in this handbook.

Liesl Wilhelmstochter, AS XXXIII

SECTION 2: GLOSSARY OF TERMS

Anchor: the point where the archer's bow hand rests when the arrow is fully drawn

Arbalist: term for crossbow

Archer's Paradox: this term refers to the tendency of arrows to fly straight ahead at the aim point even though the arrow may be slightly off to one side while the string moves towards the centre of the bow. The string movement causes the arrow to curve around the bow as it begins its flight. The arrow continues to flex from side to side as it approaches the target resulting in a wavering flight which eventually smoothes out. It is therefore important to get correctly spined arrows so they have the proper amount of flex to correct for the travel. See also 'spine'.

Armguard: a pad of various construction and form to protect the arm from the slap of the bowstring

Arrow plate: a plate attached to the side of the bow to give smooth arrow passage

Arrow rest: A shelf or other device on the bow to support the arrow during shooting. In Ealdormere arrow rests should be of one piece and non-moveable, such as shelf rests, brush rests, or one-piece plastic rests. Flipper rests, spring rests, or rests with plunger or burger buttons (that help keep the arrow in position) are not allowed.

Arrowshelf: the ledge on the bow where the arrow rests

Back: the side of the bow facing the target when the bow is drawn

Backing: reinforcing material (usually fibreglass in modern bows) bonded to the front surface of the bow

Belly: the surface of the bow facing the archer when the bow is drawn

Blunt: a blunt-tipped arrow. In Ealdormere the blunts must be made of rubber.

Bolt: short projectile, similar to arrows, used for crossbows

Bow arm: the arm holding the bow

Bow form: a form (wood or metal) used to press laminated bows into specific shapes

Bow length: length of the bow, measured unstrung along the back from nock to nock

Bow stringer: a device that aids in stringing and unstringing bows. It consists of a string longer than the bow with cups or sliders at the end to hold the tips of the bow. This device is highly recommended to prevent damage to the bow.

Bow weight: This is not the weight of the bow but the pounds of force required to draw the bow - it is usually measured at 28 inches pull. A change in draw length will affect the bow weight. A general rule is that bow weight will change by 2 to 2 1/2 pounds for each inch change in draw length. (This value changes with the type of bow.) Someone pulling a 30 lb bow to 26 inches would therefore only have a bow weight of 25-26 lbs.

Bowyer: someone who makes bows

Brace: to string a bow

Brace Height: the distance between the braced bowstring and the belly of the bow

Broadhead: type of arrow point with one or more blades - often used in hunting. Not legal for SCA shoots.

Butt: any backstop for holding targets

Cast: the capacity of the bow to propel an arrow - the higher the cast the faster the arrow and the flatter the trajectory

Clicker: a mechanical device that clicks when the bow is drawn to the proper length. Not SCA legal

Clip: spring, usually horn or metal, used to secure the bolt to the crossbow prior to shooting

Clout: a type of contest that involves long range shooting. Historically, it was at a fixed mark (the clout) and was designed to train archers to shoot a specified distance. It is scored either as the arrow which lands closest to the clout or all arrows which land within a specified distance from the clout.

Cock: crossbow term for drawing bowstring from braced to latched position

Cock feather: a fletch (usually of a different colour) at right angles to the nock. It is placed away from the bow during shooting.

Cord and Pulley: devise used to aid cocking of crossbows - consists of cord which runs through a pulley on the bow string with ends attached to the crossbow butt and the archer's belt

Cranequin: devise used to aid cocking of crossbows - consists of rack and pinion

Creep(ing): the shooting hand edging forward from the anchor point during the holding period - a cause of erratic shooting

Cresting: painted bands on the arrow shaft, usually just in front of the fletching. Used to identify and decorate arrows. This custom dates back at least to the time of the English Longbowmen.

Crown Dipping: the application of paint to the fletched end of an arrow by dipping. Used to identify and decorate arrows.

Draw: to pull the bowstring back to the anchor position

Draw Weight: see bow weight

Drift: deflection of the arrow due to external factors such as wind

Dry Fire: to release bowstring without an arrow or bolt in it. Since the energy in the limbs cannot be transferred to the arrow, it instead is absorbed by the limbs and may damage them. CAN CAUSE SEVERE DAMAGE TO BOWS!!!!

End cap: protective cap on the end of a bolt where it contacts the string

End loop: loops at either end of bowstring which fit into the notch of the bow

Face: see belly

Finger tab: a (usually) leather tab worn when drawing the bow to protect the fingers and allow for a smooth release.

Fistmele: ancient term for brace height

Flemish Bowstring: traditional longbow string, with the loops made by twisting and splicing rather than being a continuous strand

Fletching: feathers on the arrow. Plastic fletch is not legal for SCA use.

Following the String: due to the pressure of the string, bows will eventually develop a constant curve even when unstrung. This curve can become so severe that the draw weight of the bow is reduced and the life of the bow is shortened. It is therefore important to unstring bows when not in use. Wood self bows are very susceptible to this problem. Composite bows tend to be less susceptible. Bows can be straightened by heating to temporarily restore the bow, but this technique is beyond the scope of this manual and interested persons should refer to a qualified bowyer.

Goat's Foot: hinged lever designed to aid cocking of crossbows

Group: the closeness of the arrows in the target to each other

Handle Riser: the centre (generally reinforced) part of the bow

Hen feathers: 2 fletch, usually of the same colour which are not at right angles to the nock

Hold: a safety command used to bring an immediate stop to shooting. See rules of the line.

IKAC: Inter-Kingdom Archery Competition - see description of shoot types

Index: a raised point on the arrows nock which is in line with the cock fletch

Kisser: a disk placed on the string that touches the corner of the mouth when the bow is drawn to aid in consistent drawing.
Not SCA legal.

Laminations: layers of material (usually wood or fibreglass) used in constructing laminated or composite bow limbs

Loose: correct archery term for launching of bolts and arrows. The use of the term 'fire' should be avoided if possible as it refers to the lighting of firearms and is therefore inappropriate for archery use.

Nock: the grooved portion of the arrow where it contacts the string. To nock the arrow is to place it on the string. Nocks are also present on bolts used with trackless crossbows. This term is also used for the grooves on the bow limbs that hold the string.

Nocking point: a mark on the bow string indicating arrow placement. This point is often a metal ring around the serving. Most people nock under this point. Multiple nocking points are not permitted in Ealdormere.

Nut: cylindrical latch on crossbows - usually of ivory or antler

Over draw: to pull either the bow or the arrow back too far. If the bow is overdrawn (e.g., if too low a draw weight for the individual), then it can be destroyed. Overdrawing arrows (ie. which are too short) can result in the arrow exploding on release as it hits the bow.

Prod: bow portion of a crossbow

Quarrel: often used interchangeably with 'bolt' - is specifically a bolt with four-sided head

Quiver: holder for carrying bolts or arrows - generally attached to a belt, secured to the back or placed in the ground

Release: to let go of the bow string

Royal Round: see description of shoot types

Safety: mechanical device used to prevent accidental loosening of crossbow bolts

Self nock: a period nocking style where the nock is cut into the shaft perpendicular to the grain of the wood. It may be reinforced with hardwood or horn.

Serving: Thread wrapped around the bow string to form the end loops and protect the string from fraying (especially at nocking point)

Shaft: an unfletched arrow or the main body of the arrow, must be wood for SCA purposes

Sight: an aiming device on the bow. These are not allowed on recurves and straight bows. Limb marking and rear sights on crossbows are permitted.

Spanner: general term for devices used to cock crossbows

Spine: the measure of the stiffness of an arrow. See 'Archer's Paradox'. If the spine is too low, then the flight of the arrow will not smooth out quickly enough. Spine must be correctly matched to bow weight to account for the extra stresses and increased flex caused by stronger bows.

Stabilizers: rods with weights which are added to a bow to steady it when shooting. These are not SCA legal.

Stance: the alignment of the body during shooting

Static end: an end shot with a specific number of arrows but no time limit

Stirrup: device at front of crossbow to hold the bow with feet while cocking

Stock: centre portion of the crossbow by which it is held

Tassel: accessory worn on belt to clean arrows

Track: grooved portion of a crossbow where the bolt rides - may not be present on all crossbows

Understrung: a bow with a string that is too long

Windlass: system of pulleys and cords used to aid cocking of crossbow

SECTION 3: EQUIPMENT

BOWS

There are four basic bow types; straight bows (long bows), recurves, crossbows, and compounds. Most of the bows in each of the first three classes are acceptable in Ealdormere since each can be traced back to a style of bow used in period. Compound bows are unacceptable due to their use of mechanisms not found on medieval archery equipment.

The straight-stave bow or straight bow is named for its relatively straight unstrung appearance. When strung the bow is shaped like a 'D'. The traditional longbow is the most common bow of this type although many beginner bows have a similar straight appearance. In Ealdormere, these bows may be made of wood, fibreglass, or a composite of wood and fibreglass laminations. Horn or sinew may also be used as laminating materials. A few of these bows have a take-down format where limbs fit together into the handle of the bow but generally these bows are all one piece using a single material or layered laminations throughout the length of the bow.

In a recurve bow, the limbs curve back away from the inside of the bow at the ends when it is strung. The recurve can be very slight, often found in beginner's bows, or very extreme as found in Chinese, Turkish and other eastern European styles. The recurve allows the bow to develop more power when drawn and release energy more efficiently resulting in increased arrow velocity. The recurve may also be found in a take-down style where the limbs attach to the central handle or riser, either by pressure or screw fastenings.

As with the previous category, recurves are frequently made of fibreglass or composite materials such as wood and fibreglass or wood and horn.

Modern recurves generally have flat limbs layered with many laminations of wood and fibreglass. Some take-down versions have metal handles or risers. If these are not solid (e.g., they have openings), then they need to be covered so as to present a solid appearance.

Crossbows have a curved or recurved prod, usually made of metal or fibreglass set perpendicular to the stock or handle. For Ealdormere standards, the stock must be made of wood. The trigger mechanism may be either a medieval lever trigger or a more modern-looking rifle trigger. The prod may be wrapped but it is much easier to inspect it for wear if it is left bare. A safety mechanism is a good idea to prevent accidental discharge but it is not mandatory at this time. Crossbows fire bolts, also called quarrels, which are usually shorter than most arrows. The preferred trigger mechanism inside the stock is the rolling nut. The nut can be made of wood, metal or ivory (or a simulated-ivory material). Metal nuts tend to provide a slower release but the wooden nuts may lose their edges with wear thus causing rounding of the nut. This may make the trigger more sensitive and subject to misfires. Crossbows are illegal in some states, and short, single-hand (pistol-grip) crossbows are illegal in Canada; so a crossbowman must be aware of where (s)he can and cannot shoot one if they should choose to own one.

Many commercial practice ranges will not allow crossbows and likewise, some events may not be equipped to allow crossbows. Since many crossbows have as high or higher poundages and therefore greater impact on targets than straight bows or recurves, they do more damage to targets. A crossbowman may be asked to bring their own target and backstop to an event at which they want to shoot their crossbow.

Compound bows feature cables and levers or pulleys on eccentric wheels at the ends of one or both limbs. This is a modern invention to allow the pulleys and cables to do part of the work drawing the bow so that the draw weight of the bow drops as it

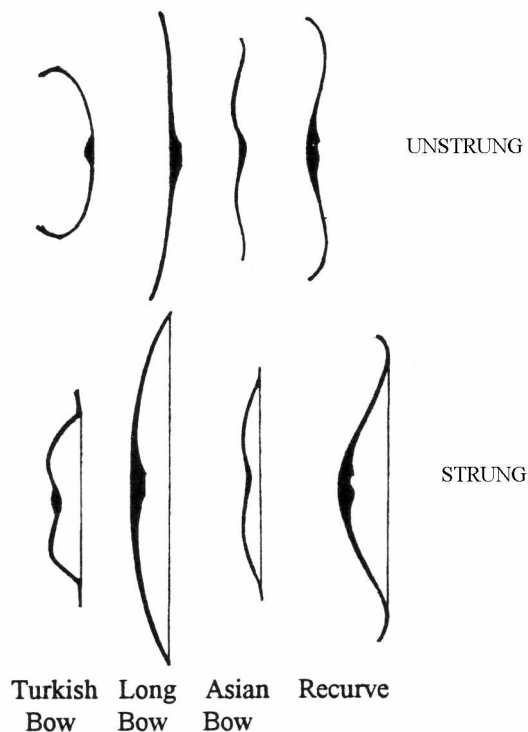


Figure 3.1 Profiles of bows when strung and unstrung

reaches full draw. It is therefore much easier to hold the bow at full draw and aiming is improved. This is opposite to other bows which increase force as draw increases. Since these devices were not used within our designated SCA period, these bows are not allowed for Ealdormerean archery.

Bows may also be classified according to the method of construction. Self bows are constructed from a single piece (usually a single stave of wood; may also be used for bows constructed from a single type of wood, but from two staves which are joined at the handle). Backed bows are constructed primarily of wood, but with a thin strip of another material along the back of the bow. If the material was wood, rawhide or silk, then the strength or efficiency was not affected but the material slowed the bows return to straightness. Conversely, if the material was sinew, then the tension of the bow was increased. Composite bows are constructed by laminating several thin layers together. Materials could include different types of wood and horn bound together with sinew and glued. Modern bows could include wood, fibreglass or steel. Recurve bows are often composite construction.

The parts of a recurve (diagram A) and of a straight bow (diagram B) are shown in the illustration. The handle or riser section of the bow may be straight or have an indentation for the hand. Although the former is more period, some feel the latter is a more comfortable grip. In some bows one-third to one-half of the riser is cut away for the sight window and arrow rest. This is done so the arrow can pass closer to the centre of the bow and hence these are often referred to as being centreshot bows. Depending on which side is cut away, the bow will be considered a right-handed or left-handed bow. This style is allowed for standard Ealdormere shoots but is not a period style and may have limitations elsewhere. Many simple bows do not have a cut-out riser and may instead have an arrow shelf rest on both sides. They may be used by either left-handed or right-handed people. The limbs of most bows are equal in their size and amount of bend. There are some exceptions to this, most notably Japanese style bows, but in general, if one limb bends excessively more than another when drawn, then a second opinion should be sought concerning the bow's usability. The side of the limbs that is closest to the string is called the face or belly of the bow. The side of the limbs that is away from the string is called the back of the bow. In cross-section limbs may be very flat or rounded, such as in a 'D' shape. In general, if they are rounded, then they are narrow, if flat, they are usually wider. Each of the shapes and widths of the limbs gives a different reaction of the bow and will affect the speed of the arrow. The tips of the bow have grooves (notches) to hold the string. They may be cut into the bow material (or crossbow prod), or may be made of a different material and be attached to the ends of the bow such as horn tips on traditional longbows. On bows with narrow tips there may be some extra layering to reinforce the tip.

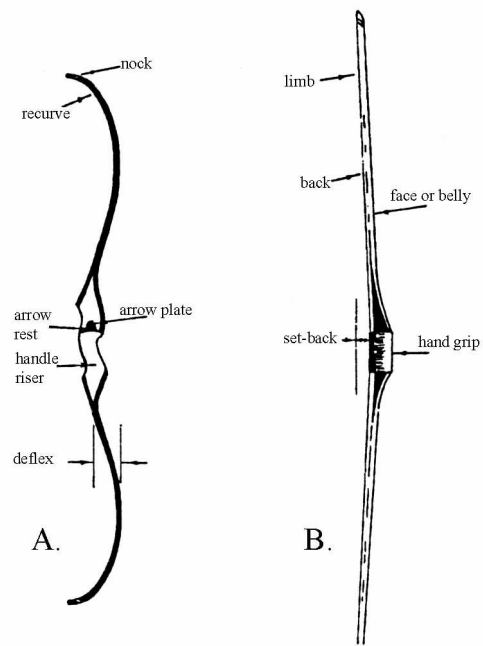


Figure 3.2 Parts of (a) a recurve, and (b) a flatbow

For SCA shoots, all of the straight or recurve bows should be "bare". This means that no sights (fixed or adjustable) should be attached to the bow nor should there be any peep sights in the string. Archers may, however, make elevation marks on the upper or lower limbs. Crossbows may only have rear sights, partly for historical accuracy and partly due to competitions or events (such as the Pennsic War) that allow only rear sights. There should be no modern attachments to the riser or limbs, such as counterweights or stabilizers. Clickers, that indicate when the arrow is at full draw, are also not allowed. Modern string release devices and kissers buttons on the string (which help to mark the anchor point) are also not period and therefore not allowed. Arrow rests should be of one piece and non-moveable, such as shelf rests, brush rests, or one-piece plastic rests. Flipper rests, spring rests, or rests with plunger or burger buttons (that help keep the arrow in position) are not allowed. Although string silencers are also not a period device and therefore not encouraged, some bows are noisy when released and, if it helps to quiet the bow so that others are not distracted, then they may be used.

Selecting a bow:

To those interested in becoming archers, a primary consideration is the proper choice of a bow. This choice is often confusing to the beginner because of the vast number and types of bows to choose from. If it is at all possible, take a knowledgeable person with you when purchasing archery equipment. Present day bows range from 4 to about 6.5 feet in length. If you will

be hunting with this bow as well as target shooting, then you will need a shorter bow. The shorter bow is easier to use in wooded areas or out of a blind or tree stand. If your intention is strictly target shooting, then you might prefer a longer bow, particularly if you have a long draw. Longer bows cast the arrow differently than short bows and have less finger pinch from the string. Shorter bows make a much smaller angle when drawn thereby providing less space for your fingers. If you have short arms and a short draw length, then you may not be getting the full action of the ends of long bow limbs and may prefer a shorter bow. There are many styles of straight bows or longbows that look reasonably correct for the period of the SCA, but they can be more difficult to shoot precisely compared to recurves. The recurve tends to be a little more accurate because the action of the recurved ends sends the arrow more quickly when compared to a straight bow of similar draw weight. Unfortunately, period-looking recurves are both rare and often expensive. Modern recurves are more readily available as well as fairly inexpensive and are therefore good beginner bows but they don't have a very traditional look. These bows are available in draw weights from 10 - 20 lb recurves, to 65 - 70 lb longbows and recurves. Generally, any poundages from 25 to 50 are within range for most SCA target distance.

When buying a longbow or recurve, it is a good rule to find a bow with a draw weight that you can easily hold at a full draw for ten seconds, then purchase one that is **five lbs. heavier**. The reason for this is that the back and shoulder muscles used in drawing a bow develop rapidly with practice. You will work into a heavier bow within a relatively short period of time. This recommendation is assuming that you will practice regularly and your muscles will improve. If you are an occasional archer only, then stick to the bow weight that you can comfortably hold at full draw for 10 seconds. Practically all bowyers have standardized their bow weights at 28 inches of draw for adult bows. The reason for this is that the arm span of the average adult male is suited to this arrow length. Children's bows may have either a 20 inch or 24 inch standard draw. Please remember that this draw length is an average and may not be best suited for you. A loss or gain in draw length will result in a loss or gain in draw weight. In most makes of these bows, the change is 2 to 2.5 lbs. per inch, i.e., a 30 inch draw length would change a draw weight of 30 lbs. to about 34 or 35 lbs. Avoid bow weights that are difficult to pull. Overly heavy bows will result in poor shooting which is often discouraging. You may find it hard to improve and the odds are that you will quit before you have developed enough muscle to allow you to improve your shooting. The following table gives a general draw weight guide as a starting point:

SMALL CHILDREN	10 to 15 lbs
YOUTH (10-14 yrs)	15 to 25 lbs
TEENS & WOMEN	18 to 30 lbs
MEN	25 to 40 lbs

These recommendations will of course vary depending upon the strength and fitness of the individual. You may also want to consider the actual weight of the bow. A heavy bow can become tiring after using it all day. When choosing a bow make sure that the bows draw length exceeds your personal draw length. Purchasing a bow with a draw length shorter than your own can be dangerous; the bow may snap outright during the draw, which can injure you and leave you with nothing but a few useless pieces of wood.

A word of caution: many used bows are available at good prices. However these bows don't usually come with warranties. Make sure you are aware of the condition of the bow before purchasing. Most reputable used bow dealers will let you 'test drive' the bow or at least get a second opinion as to the quality.

Crossbows can also vary greatly in quality and cost. They usually run from 50 to 250 pounds and therefore may be more suitable for long ranges or very precise shooting. Crossbows in excess of 175 lbs need to be approved by the kingdom archery marshal. They are slower to load and shoot than longbows or recurves so may have disadvantages in a speed shoot. The higher poundage crossbows may also shoot completely through many short range targets making scoring difficult. However, if you have experience shooting a rifle, then you may prefer a crossbow as its sighting techniques and steady-hand positions are similar to those of modern rifles. Many styles of crossbows are not specific to left-handed or right-handed shooting preference although there is a late period modification (the cheek piece) that can make them so. Therefore, be sure to check with the maker as to whether it can be used by anyone whether left or right-handed. Crossbows may also have an advantage over longbows and recurves for gentles with certain physical disabilities due to the way a crossbow is cocked for firing; using two hands or a lever-action cocking tool (goat's foot) as an aid.

Care of your bow

(by Alexander Fraser)

All bows require different types of care, and potential buyers should be certain to get care instructions from the bowyer (where possible) and follow them closely. However, in almost all cases, the following rules apply to caring for bows:

- 1) Always unstring your bow when it is not in use. Leaving a bow strung for extended periods can create "set" in a bow. If you have ever seen an unstrung bow that is curved, then you know exactly what 'set' means. (See 'following the string' in the glossary). The bow takes on a curvature when unstrung as if it *were* strung. This is definitely a negative for your bow; set robs bows of precious 'cast' (the bow's ability to project an arrow as far as possible).
- 2) Take care letting someone else use your bow. Your bow has been built to your specifications ... your draw length and your draw weight. Many a bow has shattered in the hands of a friend with a longer draw length.
- 3) Bows should always be stored flat out of extremes in temperature or humidity. When you are finished shooting your bow for the week, season, or year, try to leave it in a warm, dry place. This particularly applies to bows made only from wood. When wooden bows are constructed, they are done so only when the wood has reached a certain moisture level; leaving your bow in a damp, cool area can cause even the most waterproofed bows to pick up moisture over time and result in that nasty 'set' problem. Never leave your bow in the car when high temperatures can quickly destroy a bow.
- 4) Always ensure that the string you are using is strong enough for the bow. Generally, the rule of thumb is to make sure that your string has a breaking strength FOUR times that of the draw weight of the bow. This topic is dealt with in greater detail in the section on bowstrings.
- 5) Bow stringers are highly recommended to prevent damage to limbs
- 6) Never dry fire a bow (shoot it without an arrow).
- 7) A bow case will help protect your bow during storage and transport.

Those of us who are fortunate enough to own bows, particularly historically accurate bows - know that a bow is a weapon of artistic beauty that is appreciated by both archers and non-archers alike. Care must be taken with them, of course, both in use and in day-to-day upkeep so that you can expect to get the most from your bow.

STRINGS

The recommendations in this section should not supersede any manufacturer's written recommendations. It is a good idea to always keep the original string that came with the bow to aid in finding replacements. It is also a good idea to purchase a spare string with your bow, when possible. Beware of strings on used bows which may be of unsuitable length, style or materials.

A bow string consists of three basic parts; the string itself, the serving, and the nock point. A standard common bowstring is composed of several strings called strands and is usually one continuous string looped around many times. Flemish style strings also have several strands that are grouped into two or more lays which are then braided together. These strings are typically made with multicoloured strands. Flemish strings are not recommended for recurve bows (due to the potential for string stretch and wearing at the limb contact points since there is no serving). The recommended string material for recurves and longbows is Dacron. Dacron performs well and offers the greatest amount of safety. Kevlar is another material that has been used for strings and has shown to be very hard on bows. Kevlar strings are prone to snapping without warning. **Do not use Kevlar strings unless your bow was specifically designed to use Kevlar.** Silk, linen, and artificial sinew are examples of other string materials that could be acceptable depending on how the string is built. Artificial sinew can be very heavy and stretchy and therefore should be used with caution on recurves and straight bows. Artificial sinew is often used for crossbow strings. Metal cable is **not** an acceptable string material no matter how strong the bow. When it breaks, its whipping action can cause serious injury. Single nylon cording that is often found on low poundage or children's bows is also not acceptable and should be replaced with a standard string.

The length of the string is important. If the string is too short, then you will be putting unnecessary strain on your bow, which will reduce its life span. If the string is too long, then you may be losing some of the performance of the bow. It may also

cause the string to slap your arm, hand or the bow itself when you shoot. Slapping your body will cause bruising; slapping the bow will cause excessive wear on the string. The proper length may be determined in two ways. Use them both to confirm your proper string length. Fistmele or brace height is the first method. This is done by placing your fist between the bow and the string with your little finger against the grip of the bow and your thumb extended towards the string. If the string barely touches your thumb, then you probably have a reasonable length. (**Note:** This method will not be accurate if you tend to have small hands.) The second method is by using a bow square. On most bows the brace height should be between 7 and 8 inches; as a general rule, no less than 6 inches and no more than 9 inches. Both methods should result in fairly close values. Longbows tend to have shorter brace heights while recurves, particularly extremely recurved bows, tend to have longer brace heights. **Do not knot your string in an attempt to shorten it.** A string that has broken or that is about to break can not be fixed or made stronger by knotting it. The string is actually made weaker at knots due to the friction and tension within the knot.

The serving is a second string (usually nylon) that is wrapped horizontally around the first string to protect the strands from excessive wear. This is done in three places on standard bow strings and crossbow strings but only in one place on Flemish strings. All strings should have serving close to the centre of the string where the arrow or bolt is placed. This serving is usually six to eight inches long. Standard strings and crossbow strings also have serving at the ends where the loops of your bowstring fit on the tips of your bow. The entire loop should be wrapped as well as several inches below the loop. Flemish style strings rarely have served loops due to the twisting and waxing technique of their manufacture which adequately strengthens the loop ends. **Loops that have been made by compressed metal clips are not allowed.** These are often found on children's or beginner's bows. The cording slides through the metal clip and can release without warning.

The nock point is the last part of the string. The nock point is optional but highly useful for consistency. It allows you to place your arrow on the string in the same place every time. Most nock points are small metal 'U' shaped clips that are compressed onto the string. A period way of making a nock point is to wrap a thread of contrasting colour around the serving at the proper location. The easy way to set your nock point is to use a bow square. Attach the square to the bowstring so that the square rests on the bow shelf or arrow rest. If you shoot off of your hand, then the square should be resting on the top of your hand. Set your nock point at 1/8 inch above horizontal if you shoot with one finger above the arrow, or at 3/8 inch if you shoot with three fingers below the arrow. Ideally, your nock point will be 1/8 inch to 3/8 inch above horizontal, but each bow is unique and should be fine tuned to achieve the best performance. If only one nock locator is placed at the suggested marks, then you would nock your arrow underneath it. Often two nock locators are placed on the string, one above and one below where the arrow is to be placed. Some non-SCA styles of shooting teach use of multiple nock points on the string, each for a different distance. For Ealdormere shooting, your string must have only one nocking location for the arrow regardless of the distance you are shooting.

It is important to keep your bowstring waxed to help prevent the string from fraying. Beeswax, bowstring wax, or any similar wax is fine, but beeswax should not be used with Kevlar strings. Do not wax the serving, only the string. When a string begins to weaken, **get rid of it!** Strings are inexpensive so have a spare of the right length always available. A black Dacron string will begin to turn a greyish-white as age and fatigue set in. This is a good indication that it is time to change the string. Waxing can help extend the life of a string but it is not a cure-all for a string that already has broken strands.

When making a bow string, it should be able to handle four times the strength of the bow ie. a string for a 50 lb bow must be able to withstand 200lbs force before breaking. The strength of the various construction materials varies, therefore strings made from weaker materials may be heavier. Adding weight to the string reduces the cast of the bow (another reason to wax your string - to prevent water absorption and added weight).

ARROWS & BOLTS

The arrow and the bolt consist of four major parts; the shaft, the nock, the fletching, and the point. All shafts must be of natural wood. Cedar is recommended, however fir, birch, and some of the harder pines are acceptable. The birch and fir tend to be stiffer woods, giving less flex in the arrow. All shafts should be fairly straight and without cracks or gouges. Your arrows or bolts should all be the same length and weight. Arrows and bolts are weighed in grains and should not vary more than 20 grains. Most sets of purchased shafts will vary from 10 to 20 grains on an average.

Arrow nocks are usually plastic and attached with glue. There are several varieties, the two most common are 'speed nocks' and 'snap-on nocks'. You may need to try both in order to determine your preference. For more period shooting you may need a self-nock. This is where the back of the shaft has been notched out perpendicular to the grain and finished to fit the

bowstring. It may be reinforced with silk or nylon thread wound around the shaft near the notch. This winding is optional and any of the above nock forms are acceptable in Ealdormere. Bolt ends should be cut flat and perpendicular to the shaft. They may have a concave (curved inward) shape but may not be convex (curved outward). They do not need to be capped but some bolt makers will cap the ends with either metal or plastic.



1. shaft 2. fletching 3. tapered shaft 4. point 5. nock

Figure 3.3 Parts of an arrow

Bolts usually have two fletches that are set at 180°. Some styles of crossbows have a grooved arrow track, deep enough for fletching. These bolts will have three fletches set evenly around the shaft. Most bolts will have feather fletching although leather, thin wood, and parchment fletches are period and have occasionally been used. Arrow fletchings must be feathers. Fletchings are usually done in a three or four feather style. The three feather style tends to be faster once released due to less air friction and drag. One of the feathers is called the cock feather and is usually a different colour from the other two which are referred to as hen feathers. When the cock feather is pointing away from your bow, your arrow is properly set on the string. The four feather style tends to be more stable albeit slower in the air. Since the feathers are set at angles to the bow, none of them can brush directly against the bow so there is no need for a cock feather. This allows an archer to nock the arrow without worrying about its position relative to the bow and therefore it may be slightly quicker to nock. Fletchings are usually attached in one of three different patterns; straight, angled, or helical. This is important because it affects the rifling or spiralling of the arrow in flight. The helical will give you the most spiral, thus giving you the most stability. The angle is next in spiral effect and stability, while the straight arrow is last. The trade off is speed. The helical pattern is the slowest arrow, the angled pattern the next slowest, while the straight fletching is the fastest. You may need to try out each style to find your preference.

Acceptable points for SCA use are blunts, bullet points, most bodkin points, field points and target points. All of these types may be made of metal, although the blunt must be made of rubber or plastic. (**Note:** Blunts are only used for special shoots.)

Hunting points, broadheads, and fish points with barbs are unacceptable. These points tend to be much more dangerous and they will destroy targets rather quickly.

Arrows in particular, but also bolts, need to be matched to your bow's draw weight and cut to your proper length of draw or the crossbow's draw length. The longer an arrow or bolt, the more flexible it is. Shorter bolts are stiffer but are also less stable in flight. Draw length for arrows can be determined by simply nocking and drawing a long shaft in a safe direction while having someone mark the shaft about 1 inch in front of the bow. Cut the shaft at that mark, taper the end and add your point. For crossbows measure the length from the end of the crossbow to the nut where the bolt will be held and add 1.5 inches. After you taper the end and add the point, the point of the crossbow should be beyond the bow stock. Longer arrows and bolts will affect the flight but are not dangerous. **Do not use arrows or bolts that are too short.** If your arrows are too short, then they may shatter against the bow and splinter into your hand, arm or other body parts. For crossbows with a quarrel guide or rest at the front, bolts that are too short may catch on it if the point is not cleanly set and become deflected.

The spine of the arrow refers to its stiffness. For best performance, the arrow should be matched to the draw weight. Arrows that are too stiff for the bow weight will perform poorly, having insufficient flex to straighten out during flight (see archer's paradox in glossary). **Do not use arrows or bolts that are underspined.** Shafts that are not stiff enough for the bow weight will also perform poorly but in addition, they may shatter or explode upon release, causing injury. To properly check the spine of an arrow requires special equipment, usually not available at SCA ranges although many commercial ranges may have it. Use caution if you borrow arrows or bolts from anyone. Be sure to get the same or greater spine than you need for your bow's weight.

ACCESSORIES

There are various accessories that you may want or need to acquire in order to shoot comfortably. Longbows and recurves tend to need more than crossbows due to the closeness of the string and its action to the body.

Shooting Gloves / Fingertabs

When the string on a recurve or longbow is pulled back and held in position to be released, it places a great deal of pressure on the fingertips. The friction of the string during release and the pressure of drawing and holding the string can damage flesh

and create calluses on the fingertips of the release hand. This is especially true for high poundage bows which require more force to draw, and also for short bows whose strings form an acute angle causing a pinching action on the fingers. To protect the release hand, a shooting glove or fingertab is commonly used. Medievally, a full glove was worn. Modern shooters have cut away the unused parts of the glove leaving protection only on the three fingers that actually draw the string. Whether you use a full glove, partial glove, or finger glove be sure that it fits snugly enough not to slide around when you release, yet not so tight as to impair circulation. Some people prefer a fingertab which is a flat piece of leather held between your fingers and the string. On the back is generally a loop to slide over one finger and/or a tab to be held between fingers to help keep the leather in position. The standard fingertab has a wide part to protect the two fingers below the arrow and a narrower section that protects the finger on the string above the arrow. There is great debate over the speed and effectiveness of gloves vs. fingertabs. Some gloves and fingertabs are made of hide with the hair still on it. This allows for a quicker release of the arrow as the string slides smoothly over the hair. This can be very effective in reducing release problems. However, it is also harder to grab arrows with the more slippery hair surface when you are trying to nock arrows during speed shoots.

Oriental archery mentions two other devices. Japanese archers draw the string with the inside of the thumb, so you will see people with Japanese bows shooting with a 'thumb-glove' that has been specially designed for that style of shooting. An Oriental thumbing has the same purpose. It fits snugly over the thumb and the string is held behind it before releasing. It takes practice to do it correctly and requires a well-fitting thumbing so that it doesn't fly off as you release.

All modern releases and release aids are not legal for use Ealdormere. These generally have cords or levers that hold the string until they are released by a trigger. They did not exist within SCA period so for Ealdormerean shooting your fingers (or thumb) must be the controlling factor for release of the bowstring of recurves and longbows.

Armguards

When the string of a longbow or recurve is released, it may strike the forearm of the arm holding the bow. This sharp slap is very common for longbows and for understrung bows and may leave a serious bruise or cut on an unprotected arm. An armguard, also called a bracer, is worn to prevent injury and to help the string slide smoothly along the arm. Modern armguards generally come in either a forearm-only style or a full-arm style that also protects your upper arm. Medieval bracers were either a circular single-spot protection just where the string slaps, or a forearm style. Whether you need just a single point of protection, protection for your entire lower arm, or a full-arm bracer depends on the type of bow, the bowstring, how you release, your body position, and the holding position of your bow arm. Since the bracer has a secondary use in helping to prevent your clothing from being caught in the string it may also depend on what you wear to shoot. Most bracers are, and were, of leather. Medieval bracers were also sometimes made of horn. A modern equivalent of this that is seen occasionally is moulded plastic. Whether you buy one or make one be sure that it is of sufficient thickness to protect you; it actually does protect where you need it; and it has no edges, straps, ridges, ties, or buckles along the inside of the arm that might catch or cut your bowstring.

Quivers

Regardless of the bow you shoot, you need someplace to keep your arrows while you shoot. Tucking them into your belt is period and does work but they can get caught in your clothing. Sticking them point downward in the ground is an option but does not work well if the ground is exceptionally hard or muddy. The best solution is some form of arrow holder or quiver. Modern bows, especially compounds and recurves, may have a quiver that attaches to the bow. These bow quivers are not allowed for shooting in Ealdormere.

The simplest form is a ground quiver. This is commonly a horizontal ring of rope, wire cable, or metal attached to a 20 inch vertical peg or spike that can be pushed into the ground. The arrows are placed in the ring with their points resting against the ground.

An arrow stand may also be used, not only for shooting but also as an arrow and/or bow rack when not shooting. There are many designs available but most are made of wood with slots or drilled holes for individual arrows. They are generally portable and can be carried onto or off of the line easily. If this is your choice, then be sure that the arrows can be easily drawn from their positions without bending or snagging them.

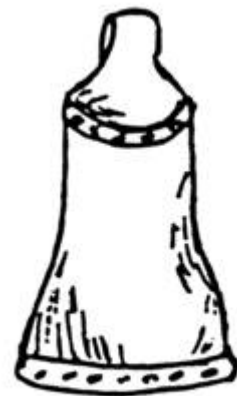


Figure 3.4 Bolt quiver. Note taper from top to bottom

There are many styles of quivers that attach to your body. The most common is a side quiver which generally hangs from a belt, either straight down or at an angle. These are usually easy to draw arrows from but can accidentally poke people as the archer turns. Back quivers hang across your back and are usually angled toward one shoulder to make drawing arrows easier.

This quiver is nicely out of the way but the arrows have a tendency to fall out if you should lean or bend over. A leg quiver attaches to one leg by a strap near the ankle and another one near the knee. They are conveniently placed near your hand but the arrows rattle when you walk. In determining your preference, you need to consider your length of reach, your range of easy motion from your shooting stance, and how you load your bow.

Quivers are generally made of leather. Arrow quivers may be straight sided or may taper to a narrower base since the points of arrows don't need as much room as the fletchings. If you have a lot of arrows, then you may want separations or compartments in your quiver to help keep the fletching from being damaged.

Bolt quivers are generally hung at the side from a belt since bolts are shorter than arrows. Medievally, their shape was much different from arrow quivers. This design allowed for the fletching to be at the bottom of the quiver and the points at the top. Commonly, crossbow bolts came with many different point styles to do different tasks and this allowed the crossbowman to grab the correct bolt by seeing or feeling its point.

Bowstringers

Longbows and recurves are generally kept unstrung and are strung only when you are planning to shoot. Although there are several methods of bending the bow in order to slide the string loop into place, using a bowstringer is the recommended method to prevent twisting of the limbs of the bow. It consists of a string with a leather or rubber cup at each end which are placed over the tips of the bow. By stepping on the centre of the string of the bowstringer and pulling upward on the bow, the limbs of the bow bend evenly and you can slide the unattached loop of the bowstring up into place. Make sure you get the proper stringer for your bow. One style works better on a longbow; the other styles shown are designed for a recurve.

Repair equipment

A variety of items are useful for repairing your arrows, bolts, and bowstring. A bow square is a T-shaped device with markings of fractions of inches that hooks onto the bowstring. It is used to mark a place on the string of longbows and recurves for the nock point. The bow square can also be used to check string height (fistmele).

Nocking pliers are used to squeeze on and pry off small metal nock points that mark where to nock your arrow on your bowstring. You may also need a supply of the metal nock points to use with your pliers.

Bow wax is used to keep the bowstring protected from water and wear by keeping the fibres together. If it is applied regularly, by rubbing it up and down all sides of the exposed strands (not the serving), then it can extend the life of your bowstring. Commercial bow wax is available but beeswax works just as well on Dacron strings.

An arrow taper tool is used to repoint arrows or bolts that have been shortened. It will also shape the nock end to receive plastic nocks if you are making arrows from bare shafts. One version looks like and works much like a hand-held pencil sharpener. Others are motorized and more efficient but more expensive.

A fletching jig is a device that holds your arrow in the correct position in order to replace fletchings. The fletching is placed in a clamp, glue is applied and the clamp slid into place where a magnet holds the fletching against the arrow or bolt until the glue dries. Some jigs can only be used for three-fletch arrows, while others have limitations of angles between the feathers. You will also need glue that allows feathers to adhere to wood. A common trade name is 'Fletch-tite'.

You may need other glues for repair of arrows and bolts. Plastic nock replacement will involve a glue that binds plastic to wood, although 'Fletch-tite' works fine for this, too. 'Ferr-L-Tite', some other hot glue or an epoxy that joins metal to wood is nice to have handy to replace points that come off.

Most experienced archers carry spare nocking points, extra arrow points and nocks with their appropriate glues, as well as extra arrow rests with them to the range in order to make repairs quickly.

Bow sling

A bow sling is a strap that attaches to your wrist and to the bow. If you shoot with a relaxed grip, then it helps keep the bow from falling too far before you can grab it after the arrow has passed. Since it was not in period use, it is not permitted for general use in SCA shooting. If you have a physical disability that may prevent you from having a secure grip on the bow, such as severe arthritis, then a bow sling may be used with permission of the marshal-in-charge of that day's shooting after consultation and explanation.

Clothing / Jewellery

When shooting, you need to consider the clothing and jewellery you will be wearing. A very common problem is loose material in full-cut sleeves that catches and slows bowstring movement. Not only does this slow your arrow but it can cause it to deflect sideways and be a possible danger to others. In general, clothing needs to fit without constriction so that you have full range of movement. You will need to consider the bow you are shooting, and your particular style of shooting to determine what is appropriate garb. For crossbows this is less of a problem than for other types of bows since the string movement is not close to your body. The long string on a longbow or long recurve has more of a chance of hitting your sleeve and arm and therefore what bow you shoot is a consideration. Your style of shooting also is a deciding factor in how close the bowstring comes to your face, chest, and bow arm. These areas should generally be free of ties, chains, pins, badges, or loose material that can catch and impede the bowstring's motion. On more than one occasion, pins and necklaces that became entangled in the bowstring were ripped off and thrown downrange when the bowstring was released. Hair too, including bangs, moustaches and beards, can become caught in the bowstring and ripped out when the string is released.

SECTION 4: RANGE SAFETY & ETIQUETTE

The first thing to recognize about shooting archery is that you hold in your hands a **deadly weapon**. It can and has killed, both through deliberate use and accidental discharge. Just as with any gun, a **'loaded' bow with the arrow in place whether drawn or not, should never be pointed at any person**. Most of the Rules of the Line given below and the age-old traditions of range etiquette were written to ensure the safety of the archer, his or her fellow shooters, and the spectators.

The ultimate safety of the range and its participants is the responsibility of the marshal in charge of the range that day and as such, his/her decisions regarding who can shoot, where a shoot is held, and when it takes place must be held in regard. However, **it is the archer's responsibility to be familiar with his/her equipment, to learn and heed the commands of the marshals, and to practice safety and courtesy at all times.**

EALDORMERE ARCHERY - RULES OF THE LINE

1. Each archer shall recognize that his/her equipment is a potentially lethal weapon, and understand the possibilities of physical injury to him/herself or others, and shall assume onto him/herself all risk and liability for harm.
2. A warranted Ealdormere archery marshal must be present at all SCA shoots and practices.
3. Archers shall pay heed to the archery marshal-in-charge and follow his/her commands.
4. All bows, arrows, and bolts must be inspected by a warranted archery marshal before the archer steps to the line.
5. Archers shall behave in a courteous and safe manner at all times.
6. Archers shall approach the shooting line only when instructed to do so by a marshal.
7. Archers shall straddle the shooting line when shooting. Crossbowmen who shoot while sitting should sit on the line. This ensures that no one is far enough in front of someone else to be hit by a misfired arrow.
8. Archers shall nock arrows only at the command of the marshal. Whenever any person is in front of the line of archers, **no arrows will be nocked!**
9. Nocked arrows and loaded bolts **must always** point downrange.
10. At the call of **"HOLD"**, archers shall **immediately** let down and lower their bows, pointing their arrows at the ground. Depending on the circumstances, the marshal may further request arrows to be unnocked and/or crossbow bolts to be fired into the ground or removed from the crossbow by hand. Any archer who sees a dangerous or life-threatening condition on the range has the right and responsibility to call a HOLD. If you do so, then quickly tell the line marshal why.
11. When finished shooting, the archer shall step back from the line and set down his /her bow.
12. Archers shall retrieve their arrows only at the command of the marshal.
13. When retrieving arrows, archers should be aware of 'deadwood' (arrows on the ground) and will not pull arrows until the marshal so commands.
14. When pulling an arrow, an archer should place one hand on the target face and one hand on the arrow shaft close to the target face. Push gently against the target and **pull straight back** along the linear direction the arrow went in. Only one archer should pull arrows at a time and all others should stand off to the side. Pull arrows on the outside of the target first. Remember to approach the target from the side and not straight on. If you are standing directly in front of the target, then the sudden backward movement as an arrow comes free may injure you. **Never pull someone else's arrows unless requested.**
15. Inappropriate behaviour on the part of any participant or spectator may result in the marshal-in-charge removing that person from the shooting area. **Do not shoot under the influence of drugs or alcohol.**

Inspection of all bows, arrows, and bolts by an archery marshal is mandatory before shooting at an official Ealdormere event. Even if you are a beginning archer, you should be able to do a general inspection of your equipment to be sure it is in usable condition before the marshal sees it. Often a coloured sticker will be placed on the bow to indicate that it has been inspected and you may be requested to show the sticker while on the shooting line.

At some events, individual shooting gates will be marked. At other times there may be simply a massed line of archers. Be sure there is sufficient room on both sides for you to shoot comfortably without accidentally putting a bow tip in front of another archer as you shoot or load your bow. It is distracting and can be dangerous if it hits them or catches in their drawn bow. If there isn't enough room, then step back and wait for the next line of archers. When you have finished shooting, step back from the line with your equipment to make room for other archers, unless instructed differently by the line marshal.

If you drop an arrow in front of the line while nocking and can reach it from your position without moving in front of the line or disturbing other archers, then you may retrieve it. If you cannot reach it, then wait until the line is closed for shooting. If your arrow or someone else's does not hit the target cleanly and hangs down in front of the target, it is chivalrous to stop shooting so the hanging arrow is not hit. If it is yours, then you can step away from the line and ask the line marshal to hold the shooting so you can retrieve it before it is damaged. This may not be possible during a timed shoot, however.

There may be many arrows in the ground in front of the target and running into them or stepping on them is detrimental to the arrow and may cause injury. You can carefully walk around the arrows, or pull them carefully out and lay them on the grass to be more visible, or hold the arrow up and wait for someone to claim it. If no one does, then take it back to the shooting line. **If you pull arrows out of the ground, then pull along the length of the arrow. If the feathers are visible, then pull backward. If only the point is visible, then pull in the direction of the point.** Pulling arrows upward perpendicularly to the ground or pushing arrows point first vertically into the ground can break them. When pulling arrows, if the arrow does not come out readily, then use a gentle rotating motion to loosen it as you pull backward while keeping your other hand against the target face. If the arrow is buried in the target past the fletching, then pull it through from the back of the target to minimize damage to the fletching. You may have to spend time hunting for arrows in the ground or woods. If this places you in a position where you may not be visible, then be sure the line marshal knows you are still on the range.

Archers are permitted to score their own arrows. An arrow which breaks the line of a higher scoring band receives the higher score. Pass-throughs and bounce-offs that have been witnessed by a marshal or another archer but cannot be distinguished as to score, may be counted as 3 points.

Just as the Society expects courtesy and chivalry from its members, these are a necessity at the range. Stay back from the line and keep silent while others are shooting so as not to disturb their concentration. Be patient while awaiting your turn to shoot, as well as letting others who have not had a chance to shoot take your turn if you've been shooting often. Be aware of your own body 'space' including your equipment. Don't intrude your equipment in another shooter's space. Be aware of where your arrow is directed at all times, especially while nocking or loading your bow. If you turn to speak to someone while on the line, then turn only your head so that your arrow doesn't swing around with the turning of your body. If there are many people shooting, then remove your equipment from the line and also keep it out of major walkways so it doesn't trip anyone. Be sure you are in suitable health for shooting, both physically and mentally

SECTION 5: BASIC SHOOTING TECHNIQUE

The following is not intended as an instruction manual but as a basic guide to instruction of novices. If you are a beginner and would like to learn to shoot, then please find a marshal who is willing to teach you or attend an archery class. This section is loosely based on the National Coaching Certification Program technique and the 'School of Shooting' in Toxophilus by Roger Ascham. Although many styles are available, a consistent teaching method will allow instruction to continue between coaches without confusion on the part of the student. These same principles apply to all bows but specifics will vary depending on whether you are shooting with longbows and recurves or crossbows. Consistency of form is the most important aspect of good shooting.

1) Ensure that the student is familiar with the 'Rules of the Line' and 'Range Etiquette', that they are familiar with the equipment and that loose clothing, long hair, eyeglasses and other concerns are accounted for.

2) Determine **eye dominance**. Example method: extend arms out in front of you with the backs of your hands facing you and forefingers and thumbs touching to make a triangular shaped space. With both eyes open, focus on an object in the distance. Close or cover the left eye. If the object remains visible, then the right eye is dominant. If the object is no longer visible, then the left eye is dominant. Eye dominance determines bow type ('handedness') so that both eyes can remain open during shooting. If the right eye is dominant, then the bow is held in the left hand and the arrow drawn with the right and vice versa for left eye dominance.

The following instructions are for right-handed shooters (arrow drawn with right hand). Reverse the instructions for left-handed shooting.

3) **Stance**: No matter which type of bow you shoot, you need to take a position that gives you stability. Body weight should be evenly distributed and centred, especially for standing positions. Individual styles may differ but good shooters are able to take a comfortable, relaxed and stable position that is the same every time they step to the line. Proper stance is particularly important for women otherwise the string can painfully strike the chest during shooting. A recommended stance is straddling the line with the left side facing the target so that there is a direct line from the centre of the target to the archer. Look at the target along your left shoulder. If you shoot a crossbow, then you may want to try different positions, such as standing, kneeling, or sitting. Many crossbow shooters find the sitting position to provide a more stable base.

4) **Nocking**: One of the more difficult parts of shooting mediievally was setting the arrow on the string in exactly the same place every time. Any minor variation will cause inconsistencies in flight from one arrow to the next. Most shooters now use a nock point to mark the place on the string where the arrow is level (perpendicular to the string and the bow face). This allows consistent placement and eliminates one variable from the complexities of shooting. If you are shooting a three-fletch arrow from a longbow or recurve, then you need to remember to turn the cock feather outward, away from the bow, to allow easier passage of the arrow. For crossbow shooters, this step actually comes third, after drawing. The major considerations in setting bolts in place is to be sure that bolt is set snugly against the string and that it is in correct placement on the stock, in it's guide track.

5) **Bow Hand and Arm Positioning**: The method of gripping the bow varies with bow type, therefore refer to an instructor for specifics for your bow. The position of the bow arm is important to prevent injury from string slap. For recurves, the elbow should be straight but not be locked and should face behind the archer. One method to achieve this is to raise the bow to the target (as if you are shooting), then bend the bow arm so that the handle of the bow touches the chest. Straighten the arm without turning the elbow

6) **Drawing**: Drawing the string back consistently on a recurve or longbow requires an anchor point. For uniform results, the same anchor point should be used each time. Although Ascham does mention drawing to the chest, even he suggests that a position on the head or face is more effective. Various anchor points include: drawing the string to your nose, drawing it so your finger or thumb is at the corner of your mouth, drawing it to your cheekbone, or drawing it to your ear. If you draw to any position on your face or head, then the position of your head will affect the anchor point. Therefore, hold your head in the same position every time with respect to your body to have a consistent anchor point.

Most people draw the string back with one finger above the arrow and two below. Others prefer to have three fingers below the arrow which is snugged against the nock point. The arrow flight for these two methods will be different due to the

difference of pressure around the arrow. Again, for consistent results, you should position your fingers the same way every time you draw.

The muscles actually used in drawing back and holding the bow are those in the back and shoulder rather than the arms. Although your arm muscles do the initial pulling, most of the work should be done by your back and shoulder muscles. You should draw the string back smoothly and uniformly. If you have to use excessive force to pull the string back, then the bow is probably too strong a weight for you.

In crossbows, drawing is actually the second step. The string must be drawn back evenly, so it is highly recommended that two hands be used for this, one on either side of the stock pulling equally. If the bow has a high poundage, then a cocking aid, such as a goat's foot, can be used to apply an even pull. Be sure the string is set and locked in drawn position before you let go of the drawn string.

7) **Holding:** There are two reasons for holding at full draw in preparation to loosing the arrow or bolt. The first is to steady the arrow in position so there are no extraneous movements that may affect arrow flight. In order to steady the arrow for a longbow or recurve, your bow arm should be 'locked' in place and not moving, while your string hand should be snugged at your anchor point. For crossbows you should check to be sure the prod is level and lock your holding arm into position. People who prefer the sitting position will often steady their bow arm against an upraised knee. The second use of taking a moment to hold the arrow or bolt in position is to provide a chance to aim the arrow or bolt. It is important not to let the arrow 'creep' forward by reducing tension during the holding period.

8) **Aiming:** Some aiming is instinctive while other aiming techniques compare sight marks or the point of the shaft to the target. When sighting, you should use both eyes or your dominant eye. To determine left-right aiming, the string, arrow tip and target centre may be lined up at full draw. Elevation aiming will vary with your bow weight and draw length.

9) **Loosing:** Releasing the arrow or bolt should be done both quickly and gently. Whether you are simply opening your fingers to allow the string to release or pulling on a crossbow trigger, your actions should be steady and smooth to prevent any jerking that may affect arrow flight.

10) **Follow Through:** The process of loosing is not completed until the arrow or bolt has completely left the bow. Therefore, your drawn and held position should be maintained until the arrow or bolt is beyond the edge of the bow. Anything that can impede or interfere with the string's movement will spoil the flight. Such hazards include but are not limited to: loose clothing, jewellery, catching hair in the string, improperly placed fingers on crossbows.

Bow stringers

All archers are encouraged (but not required) to use bow stringers to prevent damage to bow limbs. The following instructions are for bow stringers with a pocket at either end. If you are unsure which side of the bow the string goes on, then consult a marshal.

- 1) Put the string on the bow with the top end of the string on the limb, but not in the nock, and the bottom end of the string in the limb nock.
- 2) Put the stringer caps on the bow tips. If one of the caps is larger, then it goes on the bottom limb.
- 3) Hold the bow by the grip (with the grip at the top and the limbs closer to the ground) and step on the stringer (but not the bow string).
- 4) Slide the top loop into the nock while pulling upwards on the bow handle. 5) Remove the stringer and check that both string loops are properly seated in the nocks.

Physical conditioning

It is important that the bow weight is not so high that it places undue strain on muscles or tendons. This type of injury may become common if using too strong a bow or if your muscles and joints are not stretched and warmed up before shooting.

This is especially of concern to archers who shoot longbows and recurves due to the time spend in holding the bow at full draw.

Four possible warm-up exercises recommended by the late Master Thorbjorn the Graysides are given below:

1. "Reaching for the Sky". Alternating arms, slowly reach straight up. Don't just raise your arms, but reach. Do this a number of times, smoothly without jerking.
2. "Rowing". With both arms held horizontally in front of you, pull your arms back until your elbows are at your sides, with your forearms still horizontal. Extend your arms straight out again. Swing your arms in a horizontal arc until your arms are as far back as they comfortably want to go. Swing your arms forward. Repeat, alternating the two moves. Start out slowly, and pick up a little speed, and move the arms back a little further.
3. "Circles". With your arms straight out to your side, slowly rotate them in larger and larger circles. When they are as large as is comfortable, reverse directions and make smaller and smaller circles until back to start.
4. "Trunk Twists". With your hands on your hips, slowly twist your shoulders and head as far one way then the other as is comfortable. Repeat a number of times.

If you find you can't get to the range on a regular basis and want to maintain your conditioning, then you can use your longbow or recurve to do this. With it strung, but without an arrow in it, pull it back and hold it at your draw position for 5 seconds. Let the string down slowly without releasing it. **Do not dry-fire your bow!** (To dry-fire a bow means to release the string suddenly without an arrow in it. Since the energy in the limbs cannot be transferred to the arrow, it instead may be absorbed by the limbs and damage them.) If you pull and let down your bow on a regular basis, such as 10 minutes, three times a week or five minutes every day, then you should be able to maintain your conditioning.

Most archery in the SCA is done outdoors on sunny days. Part of physical conditioning is to be prepared for hot weather conditions and their effect on your body. In order to prevent heat exhaustion, heat cramps, dehydration, or the more serious condition of heat stroke, an archer should be sure to drink plenty of water before, during and after long hours of shooting on hot and/or muggy days. Using sunscreen as well as having a hat that can be worn while shooting (or at least between shoots) will help guard against sunburn.

SECTION 6: MARSHALLING

The overall archery marshal hierarchy is as follows:

Kingdom Archery Marshal - Archer General (reports to the Earl Marshal)

Marshal - in - Charge (at the specific event only)

Warranted Marshals at Large

Marshals -in -Training (MIT's)

In addition, Baronies/Shires may have group marshals (called Captains or Lieutenants)

GENERAL MARSHALLING DUTIES

A marshal's primary duty is to create and maintain a safe environment in which SCA archery may take place. **SCA archery shoots may occur only if a warranted marshal is present**, whether at SCA events or practices. Therefore, a warranted archery marshal is responsible for the range layout, equipment inspection, range operation, and reporting of what occurred. In order to maintain a warrant, an archery marshal must do three things; practice or teach their specialty, serve in marshalling duties, and communicate.

Warrants are issued by the Archer General upon fulfilment of the MIT's training. They are renewed yearly, by the Archer General for all marshals. Failure to be active, especially in service or communication, may cause a warrant to be revoked. If a previously warranted marshal has had his or her warrant lapse or be revoked, then she or he must start the process of re-warranting as an MIT. If a formerly warranted marshal feels his or her warrant was revoked for an unfair reason, then an appeals process may be followed by submitting a statement of circumstances and a request for reinstatement to both the Archer General and the Earl Marshal. Marshals who do not expect to be marshalling for an extended period, but are still interested and expect to return to the job eventually, can be given inactive status and do not need to retrain when they return to service.

MARSHAL POSITIONS AND RESPONSIBILITIES

Marshal-in-Charge

The Marshal-in-Charge (MIC) is the title given to any marshal who is in charge of archery at an event or practice. S/he is ultimately responsible for the safety and activities on the range that day. Duties of the MIC include:

1. Coordinate with the event steward (autocrat) to determine possible activities:
 - a) Check out the tentative site with the autocrat to discuss having missile weapons activities at the event and to determine space available and any safety factors or problems
 - b) Determine if archery is feasible depending on site factors and marshals available - be sure notification of archery activities is mentioned in the newsletter ads
 - c) Decide if the overall theme of the event can be carried into archery competitions
 - d) Decide if any classes or instruction could be held and if so, when
 - e) Make a tentative schedule including inspection times and competition and/or class times to put into the event flyer
2. Be responsible for range set up:

- a) Arrange to bring or have delivered to the site all materials needed for backstops and targets
 - b) Arrange for assistance in marking distances, setting up targets and backstops, and laying out safety lines if necessary
 - c) Have all paperwork ready (sign up forms, scoring forms, event report) and consider providing a place to work (table and chairs) near the line
 - d) Consider having prizes or scrolls available for winners of competitions to help recognize achievement
3. Supervise all inspections and running of lines (assuming you have help and don't have to do it all yourself):
- a) Be sure all equipment is inspected before it is used - if using stickers, then be sure to have an adequate supply
 - b) Make sure all participants are familiar with and follow the rules of the line
 - c) Be sure to give specific instructions before each competition and ask for questions before it is shot
 - d) Make sure all participants understand the scoring system that will be used and who will do the scoring
 - e) Settle any difficulties or differences of opinion with good judgement, **courtesy and tact**
4. Be responsible for range takedown:
- a) Arrange for assistance in removing all backstops, targets and other markings
 - b) Leave site cleaner than when you arrived
 - c) Submit paperwork to the proper office - scores to the scorekeeper in charge of that shoot, event reports to the seneschal and the kingdom archery marshal - **submit all reports on time**

If there were any major injuries that required a doctor's care, then an additional incident report should be sent immediately (within 24 hours) to the Archer General and the Earl Marshal.

Marshal-at-Large

A Marshal-at-Large may or may not be attached to a shire or barony. All Ealdormerean archery marshals are considered marshals -at - large. They may also act as MIC or group marshals. Marshals-at-Large should help whenever possible at any events they attend.

Duties include:

1. Be available to serve within your own group, in neighbouring groups, or at any event you attend. Let your group know if you are willing to be MIC for an event or a practice.
2. **Report twice a year**, November 1st and May 1st, to the kingdom officer giving a minimum of SCA and modern names, current address and phone number (or e-mail) and a brief synopsis of your activities as a marshal. If you were not active for whatever reason, then state so, but do report! Send a copy to the baronial/shire captain if there is one.
3. Let your group know any special talents you may have that relate to archery so that you can act as a resource for others. This might include research, teaching, actual construction of equipment or anything else you feel you could share.
4. Assist in the training of MIT's.

Group Marshals for Shires or Baronies

If there is more than one marshal in a shire or barony, then one may take a leading role and act as the group's archery officer. She or he may style themselves a **lieutenant** or **captain**. The duties of a marshal of a shire or barony are at the discretion of the shire or barony. Their duties may include but are not limited to encouraging archery, setting up and running practices, assisting with events, and communicating with other marshals.

Duties may include:

1. Coordinate archery activities in his/her shire or barony by:

- a) Scheduling and attending group practices
- b) Keeping an up-to-date list of all those who participate in archery activities in your group
- c) Keeping track of MITs and their progress
- d) Keeping spare equipment on hand for instructing new people
- e) Having spare targets and other necessities available as needed

2. **Report on a timely basis** by means of: personal and group activity reports to the kingdom officer. Due dates are November 1st and May 1st. This should include a summary of archery activities, a personal report on your own marshalling activities, a brief report of MITs' status of training, and your current address and phone number (and e-mail, if any). If there are other marshals in the group, then the lieutenant or captain may include a summary of their activities and updated personal information in his or her report so they do not have to report individually.

3. Encourage archery in his/her group by:

- a) Suggesting inclusion of archery activities when events are being planned. Be on hand when tentative sites are looked at and when the final site decision is made.
- b) Helping train MITs.
- c) Encouraging education of both participants and other marshals by teaching or organizing local workshops.

Archer General (Kingdom Archery Marshal)

The Archer General needs to have the ability to communicate with others, to be able to judge others ability to fulfill the duties of an office, and to be able to answer a multitude of questions, some of which require decisions to be made. They should do all that is possible to encourage interest in and practice of archery within the kingdom. The Archer General must also be capable of making policy decisions with the input of the archery marshals and the approval of the Earl Marshal. The position of Archer General is considered that of a Lesser Officer of State, and as such also has a strong duty to the Crown and the Privy Council. The Archer General is the ultimate resource and as such gets asked many questions concerning archery and marshalling.

Her/His duties include:

1. Coordinate activities of all marshals within the kingdom by:

- a) Receiving the semi-annual reports from the marshals.
- b) Solving problems, anticipating problems or clarifying misunderstandings by answering questions and initiating frequent dialogue with marshals at events.
- c) Communicating frequently in the kingdom newsletter.

- d) Keeping an up-to-date address/phone list of all warranted and inactive marshals and MIT's.
- e) Renewing warrants annually
- f) Coordinating warranting and training of MIT's
- g) Consulting periodically with the Crown and the Earl Marshal in order to best respond to kingdom needs.

2. Report to the Earl Marshal by means of:

- a) Writing reports on the state of archery in the kingdom.

Reports should include:

- i) a summary of archery activities in the kingdom
- ii) a list of current warranted marshals
- iii) a brief summary of the status of current projects you are working on or have delegated
- b) Regular check-in at events or by e-mail on the status of current projects

3. Encourage archery throughout the kingdom by:

- a) Supporting ideas and projects whenever feasible.
- b) Suggesting projects that would help to encourage activity or improve accuracy and accepting feedback on the success or failure of said projects
- c) Being a resource for archery and maintaining and enforcing all safety rules
- d) Travelling to various regions throughout the kingdom to both encourage archery and gain feedback on activities (being visible and accessible).
- e) Making award recommendations to recognize service and skill in archery in the kingdom.

BECOMING A MARSHAL

In order to be warranted in Ealdormere as an archery marshal, an applicant must be at least 18 years of age and a member of the Society for Creative Anachronism. A person interested in being an archery marshal should have a general knowledge of the sport, a moderate amount of experience and skill, and most importantly, a willingness to serve.

A person wishing to become an archery marshal should request an application from the Archer General. A copy of the form is also in this handbook in the Appendix. He/She must fill out the personal and SCA information and experience parts of the form. He/She should carry this form with him/her to events while they are being trained and will be referred to as Marshals-in-Training (MITs) during this time. MIT's must send their contact information (SCA and modern names, contact information and group affiliation, if any) to the kingdom archery marshal before they can be recognized as MIT's and begin their 'official' training.

MIT's must have sufficient experience in all 3 areas of marshalling: setting up a range, running a line and inspections. This experience may be gained by going through a MIT training period or by having extensive previous SCA or non-SCA experience (eg. marshalling in another kingdom or NCCP coaching certification). The MIT should discuss their qualifications with the Ealdormere Archer General to determine what their specific training requirements will be. All MITs need to be familiar with the material in the archery handbook (excluding the historical and sources sections). If the MIT is to go through the MIT training program, then they must assist with inspecting equipment on at least three different occasions, be in charge of running a line under supervision on at least three different occasions, and assist the marshal-in-charge to set up the range at

least three different events or practices. These must be significant training contributions (not just manual labour) and must include discussion of relevant points by the supervising marshal. If the MIT shows competence at one or more of the facets of training listed above at a particular event or practice, then the supervising marshal should sign and date the specific activity on the MIT's application form. The supervising marshal should not sign the form unless they feel the experience has made a significant contribution to the MIT's training.

When all areas of training have been completed, the MIT should make a copy of the completed form to keep for his or her own records and send the original to the Ealdormere Archer General. The MIT will then be asked to write a test. Successful completion of the test (no more than 3 incorrect answers) will result in the issue of a warrant card and the new marshal can begin any marshalling duties.

SECTION 7: INSPECTION PROCEDURE

The purpose of inspection is; to ensure that all equipment being used is safe, to provide participants with information about the state of their equipment, and to inform them of optimal methods of equipment maintenance. **ALL EQUIPMENT MUST BE INSPECTED**, regardless of the experience or SCA rank of the archer. Unless the marshal is literally the only qualified person to inspect equipment at a site, s/he should not inspect his/her own equipment.

At the inspection site, useful supplies would include at least one repair/maintenance kit as complete as possible (string wax, nocking pliers and string nocks, bow square, fletching glue, metal point glue, bowstringers), a copy of the Rules of the Line, a schedule of events and descriptions of the day's shoots, a supply of inspection stickers, pens and markers, scoresheets and a calculator, and this manual.

It is the responsibility of both the archer and the inspecting marshal to be sure that all equipment is inspected before use.

EQUIPMENT INSPECTION

Longbows, recurves and other straight bows

Ideally, this equipment should be handed to the inspecting marshal unstrung. This ensures that the bow may be examined under all conditions, and also allows the marshal to evaluate the archer's competence at handling his/her own equipment. It may occur that the marshal will be given a pre-strung bow to inspect. In such an instance, the archer should not be required to unstring it solely for inspection. In this case, simply begin inspection with procedure step 4.

1. Hold the bow lightly and look it over in a general way to see if any major flaws or irregularities stand out. Get a general feel for the age and condition of the bow. Check for markings that might tell the strength or poundage of the bow.
2. Closely examine the limbs of the bow, on both sides, both visually and tactilely by gently running your thumb and forefinger along the surface and edges of the bow. This is to be a detailed examination of the bow material, with a view toward checking for structural degradation, delamination, hairline fractures, points of impact damage, etc. Any suspected fractures or delaminations should be very closely examined and probed gently with a fingernail to determine approximate depth, width and extent. If fractures or cracks extend beyond the first layer of the bow, or if sections of a layer can be lifted with a fingernail, then this is cause for concern. In moulded fibreglass bows and fibreglass laminate composite bows check for visible air bubbles at or just under the surface. If they are large (half-inch or more) or are clusters of multiple bubbles, then this indicates a potential weak point and is cause for concern.
3. Closely examine the nock ends of the bow. Check the bowstring loop for frayed, broken or unravelling servings. If the serving is loose or broken, then it should be re-served before use. Check the nock end for cracks, delamination and worn nock channels. If the cracks or delamination extends down the limb beyond the ends, then it is cause for concern. If the nock channels are so worn or broken on the edges that they might have difficulty keeping the string in place, then it is cause for concern.

At this point if the bow is not already strung, then the archer should be asked to string the bow, and strongly encouraged (but not required) to use a bowstringer. If the archer does not have one, then there should be one available to be borrowed from the inspection station. If the archer is unable to string the bow by any method, then the marshal may assist, but should be advised that such action may place the marshal in legal responsibility should the bow be damaged while the marshal has it in hand.

4. With the bow strung repeat the first three steps. Structural flaws that were invisible when the bow was unstrung may appear when it is under tension.
5. Check to see that the bow has no illegal equipment on it (see section on legal equipment). If it cannot be removed, then the archer should find a way to make it unusable for the day. If the equipment is illegal for the SCA, but meets all safety

requirements, then the archer may be allowed to use it for the day, but is not allowed to participate in any competitions and should be politely asked not to bring the equipment to any future events unless it can be modified.

6. Sight down the length of the bow to check for possible limb twist. This is particularly important with regard to recurve flatbows. If the twist is so excessive that the string will not line up with the bow limbs, or is not centred on the nock channels of the bow, then this is cause for concern. The string may twist out of position as the bow is pulled. (**Note:** Some self-bows contain natural twists. Examine the overall pattern of the string and the bow. In most cases the ends and the centre will be in line regardless of what twists and turns occur in the limbs.)

7. Look over the string to determine any obvious problems, such as loose or unravelling servings, frayed or broken strands, and the presence of knots. Lightly move your fingers along the length of the string and check for 'fuzzy' areas to determine how dry the string is. Dry or 'fuzzy' strings indicate a need for bow wax to be applied to the bowstring which should be done before it is used much more. Loose servings would have to be repaired or the string replaced before the bow could be used. (**Note:** Flemish strings and other period strings such as linen ones usually do not have servings at the loop ends. However, they should be served in the centre. Flemish strings may appear to be unravelling. If there is still 2 inches or more of twisted strands, then a good bow wax job will stop the untwisting. If there is less than an inch, then there is cause for concern.) If strands are frayed or broken, then this is a cause for concern and the string should be replaced before the bow is used. If knots are present in the string, then they are a cause for concern due to the unevenness of wear. Knots often hide potential problems. Since knots are impossible to undo, the string should be replaced before the bow is used. (**Note:** One knot is allowed, the bowyer's knot. It is used at only one end of the string and does not stress the string like other knots. If the archer knows what it is and can explain why it is appropriate on his/her string, then it probably belongs there.)

8. Note the distance from the string to the bow at its widest point. This 'fistmele' or brace height should roughly conform to the distance from the bottom of one's fist to the top of his or her outstretched thumb (assuming you do not have excessively large or small hands). For most bows this should be 6" to 9". A significant variance in this may indicate a string which is too long or too short for the bow and should be replaced with the correct length string. Recurves generally have larger fistmeles than longbows or other straight bows. If a nock point has been placed on the bowstring, then you can use its presence to see if the string has been placed on the bow correctly or if it is upside down. Also check the grip position in relation to the string to see if the bow has been strung correctly or if it is backwards. (This is extremely common with light poundage moulded fibreglass bows.)

The next steps involve examination of the bow while it is held at a full draw. The marshal should ask the archer to slowly bring his/her bow to a full draw, hold it there for a moment, then let it down slowly back to rest position without releasing the string (dry-firing the bow). The marshal should be careful in phrasing these instructions indicating that the archer should "**let the string down without releasing it**". This careful phrasing is needed with some new archers to whom 'release' means to let go of the string. Misunderstanding these directions has caused some archers to dry-fire their bows during inspection. Care should also be taken to indicate where they should stand and what direction they should point the bow in order to avoid bystanders. The marshal should be at 90° to the archer in order to see the bow in profile. If needed, the archer may be asked to draw the bow more than once to check it from another angle or to observe a potential problem area.

9. With the bow drawn, observe the overall appearance of the drawn bow, checking specifically for a uniform and symmetrical form. With the exception of Japanese longbows, there should be even stress on the upper and lower limb which shows as even curvature. If a great disparity is seen, then it is cause for concern. Also observe the archer while the bow is being drawn, especially in regard to the archer's capability of drawing and holding the bow. If the poundage is too great for the archer, then there may be trembling in the arms and/or an inability to keep the bow steadily aimed. If this is seen, then the marshal should inquire of the archer as to the appropriateness of that poundage for him or her. (**Note:** There are some disabilities that may cause the same effects but they will be present even when not at draw. If this appears to be the case, but the archer has not informed you of any problem, then you may tactfully inquire.)

10. If problem areas involving cracks, suspected fractures or possible delaminations were noted earlier in the inspection process, then they should now be looked at again under full draw. As the archer slowly draws the bow, look closely at the problem areas. If necessary, place your finger lightly over the area. If you see or feel movement, then the damage is deeper than the surface. This is cause for concern and the bow should be returned to rest position, unstrung and not used.

11. After the bow has been drawn once and let down, observe the position of the string loop in the nock ends. If it does not return to the midline or groove provided for the string on some bows, then it indicates a fairly serious twist of the limbs. Ask the archer to draw the bow a few more times and observe the string position after each draw. If the string continues to 'walk'

away from the centre line, then it can cause the bow to de-string in mid-shot, which is an unsafe condition. If the string is only slightly off the mid-line and does not change with successive draws, then the bow may be reasonably safe to use but does have a warpage problem that the archer should consider fixing.

12. Last but not least, look at the archer to observe the appropriateness of his or her clothing and general physical state. You may tactfully point out potential problems with puffed or full sleeves, pins and brooches, lirapipes or hood dags, armour, or anything else which may interfere with a released string in a hazardous manner but refrain from making it an issue. However, if the archer is experiencing physical difficulty or mental confusion from overindulgence of drink, medication, dehydration, or less apparent causes, then this is cause for concern. The archer should be diplomatically but firmly persuaded not to shoot. Call in the autocrat, Earl Marshal, seneschal or the Crown as necessary for advice or a second opinion.

Arrows

The marshal must also inspect the archer's arrows but it is impractical to evaluate each and every arrow. One or two, taken randomly from the quiver, should suffice to determine if they are legal and safe equipment. If problems are seen with the first two, then more should be pulled to see whether an overall pattern develops. When done inspecting return the arrows to the archer or his/her quiver. (**Note:** Some quivers have sections and the archer may have arrows separated for a reason. Exercise courtesy; return them where you got them.)

1. Check the composition of the shaft, point, nock, and fletching to see that they match the kingdom and shoot requirements. Beware of wood look-alikes that are actually composed of fibreglass.
2. Check the security of the nock and points by gently twisting them at each end. If they feel loose or come off, then they should be re-glued before use. It may also indicate that the rest of the points or nocks may have a similar problem if they were all put on at the same time. (Glues lose adhesive ability over time.)
3. Look over the fletching to check for any places where it is pulling away from the shaft. Missing fletching is not dangerous, but fletching that is only partially attached may catch on the bow or scrape the shooting hand. A small dab of glue on loose ends can prevent the problem from worsening.
4. Run your hands over the shaft and visually check it for dents or gouges. Sight down the length to check for straightness. You are looking for places on the arrow that may be ready to break or have already broken inside (compression fractures). If many dents and gouges are found, then the arrows have been heavily used and it may be time for the archer to get some new ones. Dents that are deep and long may be a cause for concern, talk to the archer about them asking if they are still flying well. If a gouge is large enough that actual wood is missing (about one sixteenth of an inch or more deep), then the archer should set that arrow aside and not use it since the strength of the shaft is weakened at that point. A compression fracture often shows up as an abrupt bend, or a thin band of irregularity in the painted or varnished surface. This is an arrow that **is** broken but does not show it on the outside. It should **not** be used. Recommend that the archer break the arrow at the fracture so s/he cannot accidentally shoot it. (You should **not** break the arrow unless the archer requests you to do it.)
5. After handling the arrows you should have a good sense of their length. Compare that to the size of the archer. If the arrows appear much shorter than the archer's arm length, then there is cause for concern. Arrows that are too short will impact against the bow or the hand when drawn too far. If you are not sure, then ask if the archer could do a quick check for you. Have the archer hold his/her arms out straight with palms together. Place an arrow between his/her hands with the nock end gently touching the chest. The point should extend at least an inch beyond his/her fingertips.

Crossbows

Crossbows should always be strung when presented for inspection. There are many styles that range from very simple lever release forms to modern rifle-like forms with safety features. If the style is unfamiliar to you, then either get assistance from a marshal with more knowledge of that style or ask the archer to describe or explain its features. Unless s/he just purchased it, s/he is probably more familiar with it than you are.

1. Look over the crossbow in a general way to note its features, to see that its form and accessories conform to the required standards, to see if any major flaws or irregularities stand out, and to get a feel for the age and general condition of the crossbow.

2. Check the table of the bow (where the string slides and the arrow rests). Inspect it closely for nicks, exposed screws/nails, roughness or anything that might abrade the string. This is very important with heavy poundage crossbows (200-500+ lbs), due to the speed and force with which the string is released. (**Note:** All heavy poundage crossbows should be treated with extra caution. A potential hazard is doubled with high poundage crossbows and can result in fast and far travelling bolts in unpredictable directions.)

3. Test the firmness of the attachment of the prod by holding the stock firmly, then grip the prod and gently attempt to move it. The prod as a whole should not slide back and forth, nor be able to be moved or wiggled excessively in its bindings. If it can be moved, then the binding system is too loose and needs to be tightened before the bow can be used. For prods held in place with wedges or clamps, even a small amount of play indicates a need to tighten the prod since it will continue to loosen with each shot.

4. If the prod is not wrapped, then examine the actual surface material of the prod. Check for parallel cracks in metal prods that may indicate possible metal fatigue. Fibreglass prods should be checked for discolourations and cracks. When fibreglass separates just under the surface, the thinner top layer becomes more translucent (lighter in colour). These conditions are cause for concern.

5. Closely examine the nock ends of the prod to determine any stress damage and any fraying of the bowstring loops. Examine the rest of the string, checking for broken strands and frayed or unravelling servings. Damaged strings should be repaired or replaced before use. Observe the position of the string in relation to the table where the bolt will rest. The prod should be oriented in such a way that the string should be pulled downward slightly on either side of the stock. If it is exactly parallel to the stock surface (just resting with little to no downward pressure), then this is cause for concern since it may cause the string to jump over or deflect the bolt when fired.

6. Examine the trigger mechanism. A barrel mechanism depends on a cylindrical nut for its action and is usually notched in two places, one for the trigger and one for the string. The nut should rotate freely and evenly but should catch at one point, the set point for the trigger. Rotate the nut to that place and then, while maintaining forward pressure against the string notches, gently pull the trigger. The barrel-nut should roll suddenly but smoothly forward. Some cylindrical nuts are tied in place while others are designed to fit the socket made for them. If you turn the bow upside down, and the nut falls out, then it is cause for concern. If it pops out when you push forward on it (as though under tension by a string), then it is cause for concern.

Spring mechanisms involve the dropping of a hook in response to pulling a trigger. These can be tested by passing a loop of heavy string (a bowstringer is a useful test string) behind the hook, then gently pulling the trigger as you pull forward on the test string. Again, the response should be smooth and fast.

If there is any major hesitation in the release mechanism, especially if it occurs consistently or if it jams without releasing, then it is cause for concern.

7. If the crossbow has a safety lock, then it should also be tested.

Bolts

As with arrows, it is impractical to try and examine every crossbow bolt the archer has. One or two selected randomly should be sufficient to determine if it is legal and safe equipment.

1. Check the composition of the shaft, point, and fletching to see that they match the kingdom and shoot requirements.

2. Check the security of the points by gently twisting them. If they feel loose or come off, then they should be reglued before use. It may also indicate that the rest of the points may have a similar problem if they were all put on at the same time. (Glue loses adhesive ability over time.)

3. Look over the fletching to check for any places where it is pulling away from the haft or is missing altogether. Missing fletching on bolts may cause it to veer upon release, as will loose fletching that gets caught on its way out of the bow. Bolts with these problems should not be used. Check to be sure that the fletching pattern matches the bow. Three-fletched bolts require a crossbow with a deep groove in the table where the bolt rests.

4. Check the shafts for dents and gouges. Dents that are deep and long may be cause for concern, talk to the archer about them asking if they are still flying well. If a gouge is large enough that actual wood is missing (about one sixteenth of an inch or more deep), then the archer should discard that bolt since the strength of the shaft is weakened at that point.

5. Check the end of the shaft that rests against the string. It may or may not be capped. If it is capped, then twist the cap gently to be sure it is secure. Check to see that the cap edges meet the shaft smoothly. If it is not capped, then check the shape to be sure it is flat or concave. If it is worn enough to be convex (rounded outward), then the string may be able to slide under it causing a misfire. Bolts in that condition should not be used. Also check uncapped ends for splits or other damage from arrows or bolts that might have hit them. Bolts with split ends or nicked ends should not be used.

AFTER INSPECTION

Assuming that the equipment passes inspection, it can be approved and allowed for use on the range. If there are many archers or many marshals doing the inspections, then a sticker system can be used to confirm that the equipment has been inspected and approved at the particular event. It is generally applied to the back of a longbow or recurve or to the underside of the crossbow stock so it can easily be seen by the line marshal as archers stand ready to shoot. This system may not be necessary for practices or very small events where only one marshal is inspecting and is able to keep careful track to be sure that all equipment has been inspected.

If questions arise about a given bow's safety, or if there is a clear violation or hazard, then the inspecting marshal's response will vary according to the size of the event. At large, highly organized events, where there are multiple marshals doing inspections it is common to refer the questionable weapon to other marshals to solicit additional opinions. At some large events, only certain marshals may have the power to reject equipment. At such events, the archer should be encouraged to show questionable equipment to those marshals for a final consideration of approval or rejection. Far more typical is the smaller, local event, at which there may be only one or two marshals. In such an instance, the marshal-in-charge must be prepared to assume responsibility for all rejection decisions. At all times, if a rejection decision is made, the archer must be informed of it in a courteous manner, and the reason for the decision explained to the archer while showing them where the problem is on their equipment. If an appeal process is possible, then that option must also be presented to the archer. Finally, alternatives for the archer should be discussed, including the possibility of the archer borrowing other equipment, or, if the problem is fixable, repairing his/her own equipment to passable standards.

Marshals will find that archers are generally accepting and good natured about the inspecting process. Nevertheless, evaluation of expensive and cherished property will seem to some to be bureaucratic and arbitrary. A negative decision regarding equipment is unsettling and dismaying at best, and can try the patience of even the most courteous of archers. The inspecting marshal should bear this in mind, and at all times endeavour to be as polite, helpful and competent as possible. Even so, a few archers will be disposed to argue no matter what. They should be encouraged to seek a second opinion from a more senior marshal, if possible, or one of the staff running the event. If the latter should occur, then the inspecting marshal should fully explain his/her reasons for rejection of the equipment to any non-archery person in authority and ask him/her to take responsibility for any decision overriding the marshal's in writing. If an archer remains hostile, then the marshal has an equal right to appeal to those same higher authorities for support in expecting reasonable courtesy from the archer. In any case, the marshal should be a model of patience and chivalry.

LEGAL EALDORMERE ARCHERY EQUIPMENT

If equipment appears on the line that is not legal for SCA purposes, but is otherwise safe, then the marshal-in-charge may, if they choose, permit the archer to shoot. They may not participate in any competitions (ie. they can shoot but not for scoring). The marshal should politely request that the archer modify or replace their equipment prior to the next event in order not to reduce the enjoyment of the other archers on the line.

Recurve or straight bows

- a) May be self-bows, composite bows, or fibreglass bows.
- b) Compound bows (those with pulleys) are not allowed.

- c) Japanese bows, Mongolian, Turkish, Magyar, or other non-European styles are allowed.
- d) Bows may be of one piece or may be take-down bows.
- e) The handle section (riser) must be solid. If not, then its openings should be covered so as to present a solid appearance.
- f) Limbs may have distance markings, but attached sights or peep sights in the string are not allowed.
- g) Clickers, kisser buttons, counterweights and stabilizers, and modern string release devices are not allowed.
- h) Arrow rests, if used, must be of one piece, such as solid leather or plastic. Flipper rests, spring rests, or rests with plunger or burger buttons are not allowed.
- i) String silencers are not encouraged but are allowed.
- j) String material should be appropriate to the bow. Flemish strings are not recommended for recurve bows but are not prohibited. If the bow can have a standard string, even if it is for a child's bow, then it should have one.
- k) One single or one double nock point on the string is allowed. Multiple nocking points are not allowed.

Crossbows

- a) Stock may be of wood or other materials. Stock should be solid without openings. If not, then the openings should be covered so as to present a solid appearance.
- b) Prods may be made of metal or fiberglass.
- c) Prods may be tied in or held in with wedges or bolts.
- d) It is preferred that prods are not wrapped but it is not necessary to take off any wrappings currently on them.
- e) A safety mechanism is recommended but is not mandatory.
- f) Rear sights are allowed, front sights are not allowed.
- g) Rolling nuts can be made of any appropriate material (wood, metal, ivory, and plastic). Rolling nuts that are tied in are preferred but not mandatory. Other string release mechanisms are allowed.
- h) String material should be appropriate to the bow and its poundage. Metal cable is not allowed.
- i) A guide path for the quarrel is required. It may be a full groove along the stock or a small guide piece at the front end.
- j) A bolt clip or other device for keeping the bolt in place is recommended but is not mandatory.
- k) Use of repeating crossbows or pistol crossbows is not allowed for official Royal Rounds or IKACs. Use in other competitions is at the discretion of the Marshal -in-Charge. **Note: pistol crossbows are illegal in Canada.**
- g) Crossbows in excess of 175 lbs need to be approved by the kingdom archery marshal.

Arrows

- a) Arrow shafts must be made of wood. Japanese arrows may be made of bamboo. Fibreglass and aluminium shafts are not allowed. Footed shafts (two kinds of wood spliced together) are allowed.
- b) Fletching must be feather fletching but may be dyed. Plastic fletch is not allowed. Three, four, or six fletch are the most common but other fletching patterns are allowed.

c) Points must be target points, field points, blunts, bullet points, or bodkin points. Hunting points, broadheads and fish points are not allowed.

d) Arrows may have self-nocks, plastic nocks, or horn nocks.

Bolts

a) Bolt shafts must be made of wood.

b) Fletching may be any period fletching: feather, leather, wood, paper. Plastic fletch is not allowed. Two-fletch or three-fletch styles are the most common.

c) Points must be target points, field points, blunts, bullet points, or bodkin points. Hunting points, broadheads and fish points are not allowed.

d) Bolt ends may be cut flat or may be slightly concave. Reinforcing with thread or capping ends with metal or plastic is allowed but not required.

Unusual equipment

Occasionally, someone will bring some unusual equipment that they will want to compete with, test, or merely demonstrate. All that equipment needs to be inspected, and if there is no one present who can with confidence inspect a given item, then politely explain that you can not let it on the range. No piece of equipment should be entered in competition that is inappropriate for that competition or that clearly violates the rules of the competition. The testing of unusual items may best be deferred until after the closing of the range. Then, if qualified marshals are willing to monitor, such items may be exercised in a much safer circumstance.

SECTION 8: SETTING UP A RANGE

For setting up any range, the marshal should be thoroughly familiar with the site available and know the space requirements of the planned shoots. In the case of an event, this means working closely with the autocrat when the site is chosen and the activities planned. It may also be necessary to arrange for lawn mowing prior to the event or practice. With knowledge of the site and shoots in mind, the actual layout of the range involves the following:

1. Pace out or measure the space available. For shoots of 50 yards or less you will need as much space behind the target as you have between the target and the shooting line. For example, a 40 yard target needs 80 yards of space beyond the shooting line. Shoots over 100 yards need half as much space beyond the target as you have in front. For example, a 100 yard shoot needs 150 yards of space to allow for overshoots.

2. Check the area for safety.

a) Observe if there are any paths or roads that may be within accidental target range or overshoots. If there are, then decide whether they can be avoided by adjusting the direction the range is pointing. If not, then any place with foot or vehicular traffic must be blocked off, if possible, and the line marshals alerted to the danger so the areas may be closely watched and a hold called, if necessary.

b) Look for any physical hazards to participants safety; ditches, gopher holes, poison ivy, etc. It would be best if they can be eliminated, such as filling in hazardous holes. If this is not possible, then mark the hazard and/or continually warn the participants about the dangerous conditions each time they must enter the hazardous area.

c) Check for physical obstructions that might cause unexpected deflection of arrows. This is especially of concern for clout shoots and woods walks where arrows may deflect off of low hanging branches or tree trunks. Arrange the target positions so as to minimize the hazard.

3. Consider the orientation of the range. If possible, the range should be facing north, or in whatever direction allows for most of the shooting to be done when participants do not have the sun directly in their eyes.

4. Based on the distances available, set out a shooting line. Its length will depend on the number of expected archers, the number of line marshals available, the space available, and the number of targets planned. Each archer usually needs about 4 feet of space on the line, so a line of 10 archers will take up 40 feet.

The line should be distinctive but not an imposition to crossbow shooters who sit or to archers in wheelchairs. Archers need to be able to straddle the line to shoot. Lines can be drawn with flour or lime on the ground, or a rope can be placed on the ground as a marker as long as it is securely pinned down so no one can trip on it.

5. From the set and marked shooting line, measure the required distance or distances out to the target position(s). If the field or shooting line is wide, then check distances to each target from the shooting line (diagonal distances are longer than distances perpendicular to the shooting line) Set the targets or target backstops/stands so that the face of the target is the correct distance. If all yardages will be shot from all line positions, then do a sight check to be sure that every line position has a clear shot to each target. Shift targets sideways if necessary to ensure that targets are not blocking other targets.

There are some instances on narrow ranges with few shooters where only one target is set up. In order to run difference distances, the target is left in a set place and multiple shooting lines are marked out. The archers move as a group forward or backward to the needed distance for each round. Set up these ranges for the furthest distance to be shot and add lines closer to the target for shorter distances.

6. To finish out the range, set up your inspection station behind the line. It is also recommended that a 10 foot space is marked off behind the line as a clear zone. This allows archers to have space to concentrate on shooting as well as providing a safety zone should an equipment failure or shooting problem occur on the line.

Woods walks are special shoots that involve targets at varying distances usually placed along a trail through a wooded area. Generally, each archer takes a single shot at a target from a single point. They can also be set up in open fields from one shooting point aiming at several targets with different distances or using individual shooting points for each target and letting

archers progress along from point to point. Due to its nature, some archers will still be on the course while others are shooting, so it is necessary to be very aware of the angles of possible overshoots when laying out a woods walk course. There are three special considerations.

The first is the actual logistics of the shoot. The shooting point should be clearly marked and archers well-instructed in whatever position (kneeling, sitting, and standing) must be used to shoot that target as well as any unusual scoring conventions. It will also be necessary to limit the number of archers at each target in order to speed retrieval of arrows. Participants can go individually but small groups of 4 to 6 archers also work well. If a woods trail is used, then marshals should be stationed at each target or with each group of archers, depending on the number of target stations and the number of marshals.

A second consideration is the placement of the targets and the possible interference from one target to the next. The 'trail' can **not** loop in such a way as to bring either the path, a target, or a target shooting point in possible alignment with another target's overshoot. Stand at each shooting point and sight along all the possible overshoot directions as volunteers walk along the trail and stand at nearby shooting points. If one of the volunteers walks into your sight window and is within range of an overshoot (as far behind the target as the distance to the target), then adjust either the target or the shooting point in direction or distance. In a field situation, targets must be far enough apart or angled sufficiently from each other (45° away) so as to allow retrieval from one while another is shooting.

Lastly, consider what physical hazards such as tree branches, tree trunks, or rocks might deflect arrows and adjust your shooting points to avoid such complications. Also consider what difficulties the participants might encounter (boggy ground, steep hills, downed tree trunks to climb over, poison ivy, etc.) These should be clearly mentioned to all participants at the beginning of the shoot so they can either dress appropriately or decline to participate, if necessary.

Indoor shoots also pose special problems, the most notable being how to avoid damage to the building. Most indoor shoots are done at 20 yards or less. When choosing an indoor site be sure that there is sufficient room behind the targets and in front of the shooting line. A 30 yard building (90 feet) will allow for 10 feet behind the targets and 20 feet before the shooting line for waiting archers. If the space before the shooting line is too small, then there will need to be an adjacent area where archers can wait their turn to shoot. Check out the floor and walls of the room and the exposed surfaces and light fixtures. Arrows can and do penetrate metal and will chip chunks out of masonry and plaster. Arrows sliding across a wooden floor will leave gouges. All of these must be protected against damage to the best of your ability. Ideally, the site should have no internal roof support pillars. If it does, then targets should be carefully placed to try and prevent arrow deflection off the pillars. For the same reason, targets should be kept near the centre of the building and away from walls so that arrows that deflect off the target stands will be less likely to hit the walls.

Some kind of arrow-stopping backstop will be needed because you will have arrows miss the targets. If hay bales are readily available, then a 10 foot high wall of hay can be built behind the targets. This works best if the hay bales can be braced against something like the back wall of the building. However, hay bales can be penetrated by arrows from strong bows, especially in the spaces between the bales. To make it more damage-resistant, place thin plywood sheets behind the bales. A wall of plywood boards will stop arrows but it tends to be noisy. Covering the plywood with carpet will lessen the sound but makes the plywood very heavy. A more lightweight arrow-stop is a 4' x 8' sheet of solid foam fibreglass insulation. Thicknesses of 2" to 4" stops arrows from even high poundage crossbows, although the arrows can be difficult to pull out. Insulation panels may shift when hit so they would need to be securely supported. The best solution is a professional archery net designed specifically to stop arrows. Most are 10 feet high and come in various 6 foot lengths. They are available from archery or sports equipment catalogues. When they are hung loosely behind targets they absorb an arrow's energy in order to stop it. A double row of heavy blankets or a row of quilted coverlets can provide a similar effect but weak places in the fabric may let arrows through. Whatever system is used should be tested with high poundage bows before the event.

Beginning archers and young archers are more likely to miss the target, especially by shooting too high. Their shots may go over any barrier. Marshals may need to be stationed close by to assist and teach, or targets may be moved to 10 yards for more focussed practice.

SECTION 9: RUNNING A LINE

As much as is possible, barring natural disasters or safety problems, run shoots at the time they have been scheduled or announced.

The actual running of a line should follow a uniform line procedure and be used for any Ealdormere shoot, including practices. There should always be, wherever physically possible, a 10 foot safety zone behind the line, between the archers shooting and any bystanders or archers waiting to shoot. This provides a distraction-free zone for the shooters and a buffer zone if there should be a problem on the line that causes dangerous conditions.

It is recommended that there is one marshal for every 10 or less archers on the line. (When youth or children are shooting this should be a ratio of one marshal for every 5 archers.) If there are more than 10 archers (or more than 5 young people), then run a second line to shoot after the first or obtain the services of another marshal or MIT. The marshal who is running the line should not be shooting at the same time. If there are two marshals who wish to shoot, then they may switch marshalling and shooting for each line. If only one marshal is available, then s/he should shoot before or after the line s/he is running and retrieve his/her arrows with the line's archers. All MITs are prohibited from running lines alone, and require supervision by a warranted marshal.

If young archers (< 18 yrs old) are shooting, then a parent (or legal guardian) **must** be available and provide written or verbal permission to the MIC. For children of age 12 and under a parent or other responsible adult, designated by the parent, must be on the range to supervise and assist if necessary. For youth (ages 13 - 17 years), a parent must be available on site if needed for emergencies.

The following procedure should be in effect at any Ealdormere SCA shoot, whether an event or a practice. What the marshal says is in boldfaced type, what the marshal and archers do follows.

1. **"Archers take the line"** - The archers should straddle the real or imaginary shooting line while the marshal checks briefly for inspection stickers if that system is in use at this day's shooting. Crossbow shooters who sit to shoot should sit directly on the line.
2. **"Clear down range"** - Both the archers and the marshal should be looking over the range to see or to hear if anyone is in the danger zone. If the range has obstructions to view, then move to the side of the range to be sure that you have a clear view behind all obstacles.
3. **"Archers prepare, when you are ready hold an arrow in the air"** - Archers should get their equipment (quiver, arrows, glove, etc.) ready for shooting. Crossbows may be drawn and cocked but bolts should not be set in them. When all archers have an arrow or bolt in their hand and not in the bow, the marshal should move back behind the line. This step is only necessary for timed shoots (to ensure all archers are prepared). For untimed shoots, skip this step and proceed to step 4.
4. **"You may nock"** - Archers should place an arrow on the string or a bolt in their crossbow. (During this procedure crossbow shooters should keep their weapon at a low elevation, only high enough to reach the target.)
5. **"Range open for shooting"** followed by either **"Shoot (# of) arrows when ready"** for static shoots or **"Pay heed to the timed count"** for timed rounds - Archers begin shooting while marshals observe the archers for dangerous actions and the targets for bounce-off arrows. If it is a timed shoot, then another marshal, a volunteer, or an audiotape may be calling the count. Timed counts should have at minimum a beginning count, **"5, 4, 3, 2, 1, Shoot"** and an ending countdown of **"5, 4, 3, 2, 1, Hold"**. Any calls in between are at the discretion of the marshal or the desires of the archers.
6. When all archers are done shooting and have stepped back from the line to indicate this, the marshal calls **"Bows down, range closed"** - If there are only a few archers, then the bows may be left on the line, otherwise they should be removed from the line so that other archers may make ready their equipment. On some occasions a shoot may allow for archers to 'fill in' spaces on the line. This is allowable if the archer does not nock before taking his or her place on the line and the marshal waits until all are done before calling "Bows down".
7. **"Retrieve your arrows"** - The archers walk forward without their bows to the target, carefully watching where they walk so as not to step on or break buried arrows. The marshal may call this after s/he has scored the arrows or s/he may have the

archers walk up and score with the marshal. If the approaching archers encounter 'dead wood' or arrows embedded in the ground, then they may carefully pull partially hidden arrows out of the ground backward along their line of entry. It may damage them to try to stick them back into the ground vertically, especially if the ground is hard. The archer can either leave them lying visibly on the ground or hold them aloft until claimed by their owner. When arrows are pulled from the target only two archers should pull at a time, one on each side of the target. The marshal may need to remind everyone else to stand back away. It is highly dangerous to have archers standing in front of the target while arrows are being pulled.

If a dangerous condition develops during shooting, then the marshal should call "**HOLD!**" All archers should immediately stop shooting, lower their bows and remove their arrows or bolts from their bows. When the condition has been corrected or taken care of, the marshal can restart the shoot. A 'Hold' is always called for a person or animal on the shooting range, for any serious injury, and for any major target obstruction. A minor problem that requires the attention of the only marshal available may also necessitate a 'Hold'. Examples of those situations might include assessing minor injuries or dealing with rowdy bystanders. If an archer on the line or even a bystander sees a dangerous condition occur during shooting that the marshal is not aware of immediately, then s/he can also call a 'Hold', particularly if it is life-threatening. The person who calls the 'Hold' should immediately notify the marshal as to the reason so it can be dealt with as efficiently as possible.

ARCHERS WITH PHYSICAL DISABILITIES

If a physically challenged person wishes to shoot archery, then there are several general things that must be considered. The first, concerns the seriousness of their condition and the limits of their ability. You as a marshal, especially if you will be teaching this person, need to know exactly what they are capable of doing on their own and where they might need assistance.

If it is determined that continued assistance will be needed, then the second consideration is who will provide it. Generally, if you are a line marshal or marshal-in-charge, you have other responsibilities. It would be best for the person to find a friend or assistant who can come with them to the range every time. This allows them to work in a supportive relationship where the assistant understands both the activity and the needs of the disabled archer and can act effectively to help integrate the two.

The third consideration for the marshal is to determine what rules concerning equipment, the range itself, or the running of the line must be modified to allow the person to shoot while maintaining safety. The allowed equipment and regulations can often be modified as needed to help a disabled archer shoot safely to the best of their ability. Although mechanical release aids are not period and therefore not appropriate equipment for most shooters, some alternative form may be needed by the archer with arthritis who has lost flexibility in their fingers. In most shoots, spotting (giving information about an arrow's flight path) is forbidden. However, a blind person may shoot with the assistance of an experienced spotter. In a similar manner, deaf archers can shoot speed rounds if a signal or cue can be arranged to indicate when to shoot and when to hold.

The key overall concept is safety. Regardless of the disability, if the person is able to get the bow loaded, drawn, and released without potentially injuring themselves or anyone else, then they should be able to participate in archery activities. Each person's needs and limitations will be different and should be judged on a case-by-case basis. If you are running a line that has a person with physical disabilities, then you should ask politely if they need any assistance. If you have concerns, then you may courteously express them and ask about their ability in archery, perhaps even asking them to shoot a round while you observe. As a marshal you certainly have the right to express concern, especially if you have never seen the person shoot before, but reserve your final judgement until you have talked to them.

UNUSUAL CIRCUMSTANCES

This handbook cannot be regarded as providing solutions for all the various problems and circumstances that may come up in the performance of your marshalling duties. As a trained archery marshal, you are expected to possess a modicum of creativity and common sense, and the will to use them when needed. Nevertheless, there may arise from time to time circumstances which are unusual enough to be rare, but of such a nature as to warrant some general commentary on them.

Inclement weather

If you are Marshal-in-Charge of an outdoor range, the weather will of course be a factor in deciding whether to hold the shoot or not. Sudden thunderstorms, unexpected gusting associated with a shifting weather front, and the threat of tornadoes are all possibilities. Coping successfully with these things requires a certain amount of common sense. The following are general

guidelines to be used at the discretion of the marshal in charge. If lightning occurs within 2 miles of the range, then close down activities and get participants under appropriate shelter. Do not reopen the range until 30 minutes has passed after the last seen stroke of lightning. If high winds are interfering with the shoot in any way, then close the range temporarily or, if the conditions continue, cancel the rest of the shooting for the day. If a tornado is spotted, then stop all activity at once, and head for shelter.

SECTION 10: REPORTS

It is the responsibility of all marshals to remain in communication with the marshallate. This necessitates the filling out of reports. It may be tedious, but reports may be the only legal records that are available even years after an event when a lawsuit is pending. Archery marshals have three different types of reports to file. When electronic forms are available in the archery section of the Ealdormere web site this will be the preferred method of reporting.

SCORE REPORTS

Currently there are 3 inter/intra-kingdom archery shoots: the IKAC, Royal Rounds, and the Winter Archery Shoot. Since these shoots involve archers from many groups, the scores are sent to a single record keeper for each shoot who compiles the collected scores for a particular shoot. In order to keep records up-to-date, most of these shoots have a time limit on how soon scores must be turned in. The deadlines and the person to whom scores for each shoot should be sent are usually listed in the kingdom newsletter the first month the shoot begins. Marshals should note down the necessary information and keep it available for later reports. Most of the scorekeepers will also accept electronic-mail and may even maintain a WEB site of compiled and current scores. Ealdormere has its own scorekeeper who should receive a copy of all scores and will forward scores to the appropriate person if requested. Contact the kingdom marshal for scorekeeper information.

The marshal who runs a shoot is responsible for turning in the score report on time. Be sure that it is legible and contains all of the required information (especially bow information and SCA name). Marshals should keep a copy for themselves.

EVENT REPORTS

An event report briefly describes the shoots that took place at a sponsored SCA event and is written by the Marshal-in-Charge for that event. It should include the winners of any competitions or shoots, any problems that occurred and how they were handled, things that went exceptionally well that should be done again or things that need to be changed. The marshals who assisted should be listed, even if they are not from the sponsoring group. If MITs were working with marshals, then a note concerning their training should be included. If any injuries occurred, these should also be mentioned, including the care given and any cross-reference to a Chirurgeon's report if one was available. **If the injury required a doctor's care, then the Archer General should be notified within 24 hours of the incident.** Reports may be submitted by e-mail.

Copies of the event report should go to the sponsoring group's seneschal, the group's archery marshal and the kingdom archery marshal within two weeks after the event. A sample form for quick and easy reporting is available in the Appendix.

SEMI-ANNUAL REPORTS

All marshals and marshals-in-training need to submit a semi-annual report to the kingdom marshal. These reports are due by May 1st and November 1st. These should be submitted on time since the kingdom marshal must report to the Earl Marshal. The report should include all of the marshalling activities done in the 6 months prior to the report, any teaching or research done, a brief mention of shoots attended, any training of MITs and, even if the rest of the report is in the negative, it should always contain the marshal's SCA name, modern name, current address, phone number, e-mail (if any) and the modern date. The Archer General may also request special information that should be included in the report so remember to read the monthly Tidings letter from the Archer General. Failure to report for more than two consecutive periods may result in the loss of the marshal's warrant for failure to communicate. (At the very least, send a quick postcard with your name, address and phone and a note indicating you are still interested but haven't done anything.

SECTION 11: TYPES OF SHOOTS

ROYAL ROUND

The preferred target is a 60 cm five colour round target face. Scoring is 5 points for yellow, 4 points for red, 3 points for blue, 2 points for black, and 1 point for white. Arrows that break or touch a line between colours are scored as the higher point value as long as none of the lower point colour is visible between the arrow and the line. As with most scoring systems, pass-throughs and bounce-offs that have been noticed by the marshal but cannot be distinguished as to score may be counted as 3 points. A possible score sheet sample is available in the Appendix.

The shoot requires a range layout of 20, 30 and 40 yards. Three static rounds are shot, one at each distance. A static round consists of 6 arrows per archer per round with no time limit. One 30 second speed round is shot at 20 yards. A speed round consists of a 5 second countdown to a call of "Shoot", a silent count of 25 seconds as marked by a second hand or stopwatch, and a 5 second countdown to a call of "Hold". ("5, 4, 3, 2, 1, Shoot5, 4, 3, 2, 1, Hold") During the time between the calls of "Shoot" and "Hold", the archer may shoot as many arrows as s/he can at the 20 yard target. Scores are usually recorded with the numerical score first followed by the number of arrows shot (for example, 28/7 meaning 28 points achieved with 7 arrows). These rounds may be shot in any order. However, for the purpose of the ranking system, unless it is physically impossible or impractical to have all yardages available for practice before the shoot, it is expected that once the shoot has begun it will continue until finished with no time out in between for practice at a new distance. On very small ranges where the target itself must be moved or the range adjusted in some way to accommodate changes in distance, practice or sighting-in shots may be taken between each round but all participants should agree beforehand as to how many should be allowed.

Scores are kept within kingdom; consult the Kingdom Archery Marshal to determine where to send scores.

IKAC (INTER-KINGDOM ARCHERY COMPETITION)

This shoot has specific categories for bow types in order to have traditional bows only in competition with other traditional bows, or crossbows vs. crossbows. It usually takes 2 hours for completion if a full line of archers is competing.

The competition season for the IKAC is from April 1st through December 1st and is only open to SCA members. Equipment standards for the Open Division using longbows or recurve are basically the same as the kingdom standards. For crossbows, the Open Crossbow Division allows front and rear sights on bows (no optical sights, however) but requires feather fletching on bolts. Crossbows may be shot from any position but must be held in the hands and not rested on supports. The competition can be shot only once for score per day in each division but archers may stop at any time and continue later as long as it is in the same day.

Targets for either of the Open Divisions are 60 cm 5 colour targets with standard scoring from centre gold outward of 5, 4, 3, 2, 1 points. Arrows that touch the line containing the next higher colour are given the higher point count. Witnessed bounce-offs or pass-throughs that cannot be determined as to score count as 3 points. The competition consists of 6 rounds, each round containing 2 ends: 2 static ends of 6 arrows each at 20 yards, 2 static ends of 6 arrows each at 30 yards, 2 static ends of 6 arrows each at 40 yards, 2 timed ends of unlimited arrows in 30 seconds at 20 yards, 2 timed ends of unlimited arrows in 30 seconds at 30 yards, and 2 timed ends of unlimited arrows in 30 seconds at 40 yards. To help reduce the time required for the shoot, the static rounds do have time limits for the 6 arrows shot. For longbows and recurves there is a maximum of 90 seconds, for crossbows, a maximum of 120 seconds.

Scores must be postmarked within 30 days of the shoot and must include all of the following or they will not be counted: name of the event, date, place, archers' names, scores by end, scores by round, total score, type and weight of bow, division, and the marshal-in-charge's name, address, and phone number.

In an effort to increase research and use of period equipment, a Period Division has been created and separated into categories of longbow/recurve and crossbow. The target is the same size but with a different scoring convention although the rounds shot are the same.

WINTER ARCHERY SHOOT

The Winter Archery Shoot is another seasonal shoot in which archers from many kingdoms participate. Its usual running time is from November 1st through the following April 30th. It was designed to keep archers in practice at both static and speed shooting throughout the usually inclement weather of winter, so it is commonly run on 20 yard indoor ranges.

Equipment standards are similar to those of the IKAC Open Division. Participating archers should include with the scores sent; their SCA group, the type of bow (crossbow, longbow, recurve, other), the bow's draw weight, and whether or not sight marks on the limbs or sights on crossbows were used. Witnessed pass-throughs and bounce-offs that cannot be determined as to score are traditionally 3 points each.

The shoot consists of 4 rounds at 20 yards, two ends of each of the following:

Target Round - intended to help maintain accuracy over the winter. It consists of two ends of six arrows untimed at a 40 cm five-ring target with standard 5, 4, 3, 2, 1 scoring.

Speed Round - intended to help archers practice speed shooting with accuracy. It consists of two ends of unlimited arrows shot in a 30 second time limit for each end. Each archer must shoot at least one arrow each end but may shoot as many as possible in 30 seconds. Scoring of the 40 cm five-ring target is standard 5, 4, 3, 2, and 1. Archers who do not manage to shoot off six arrows in 30 seconds will gain bonus points for arrows unshot. To determine how many bonus points, subtract the number of arrows shot from 6 for each end and add it to the actual score of arrows that hit the target. If the archer has not managed to hit the target at all, then no bonus points are added for that end.

Wand Round - intended to help the archer concentrate on minimizing left/right errors. It consists of two ends of six arrows untimed. Each end is shot at a target wand three feet high by four inches wide (double duct tape width). Each arrow within or touching the wand scores 5 points.

Bull's Eye Round - intended to help the archer focus on the centre of the target. It consists of two ends of six arrows untimed. Each end is shot at a target consisting of a four inch circular bull's eye centred within an 8.5 inch outer circle. All arrows within or touching the inner circle score five points each. All arrows outside the bull's eye but within or touching the outer circle score three points each.

ADVANCING SOLDIER SHOOT

This is one of the traditional War Point shoots at the Pennsic War held each August. It has also been used at war practice events and other events, sometimes in a more shortened form. In its full form it requires 6 human sized targets, one each at 20, 30, 40, 50, 60, and 70 yards. The shortened version usually uses targets at only 20, 30, and 40 yards.

This is a timed shoot where archers are allowed five seconds to shoot at each target. The count usually begins with a call of "Ready" five times, followed by "70", "60", "50", "40", "30", "20" called five times each, and then a call of "Hold". Archers may only shoot at the target that is currently being called but there is no limit to the number of arrows released within the time frame for each target. Arrows that are fired late or at the wrong target lose points. Each arrow that hits the figure is counted as one point. Occasionally a head and chest 'kill' zone is marked off and it counts two points. Generally, hits on shields and swords on figures do not count any points.

CLOUT SHOOT

This is another traditional War Point shoot at Pennsic. It is an untimed round with a limit of 6 arrows shot at a 30 foot diameter castle centred at 100 yards. Arrows that land within the castle limits count a point. If a figure target is placed in the castle, arrows that strike the figure count two points.

At Pennsic, the castle is usually built from 120 hay bales and built up to two bales high with a third row making crenulations. Arrows that would have 'skipped in' off the top of the front wall are counted whereas arrows that would have been deflected out by the top of the back wall are not counted. Since most event MICs do not have access to the needed number of hay bales, event clout shoots often substitute a drawn 30 foot circle on the ground. The circle can be drawn with flour or lime, or cordage can be fastened down to approximate a circle. If there is insufficient room to run a 100 yard clout range, then

centring the circle at a shorter range, such as 70 or 75 yards will still allow participants to experience the techniques of shooting a clout without needing 150 yards of space.

CASTLE WINDOW

This is one of the newer Pennsic War Point shoots. It is also an untimed round with a limit of 6 arrows. A target drawn to resemble a castle window slot is set at a distance of 30 yards. As members of the attacking forces, the goal is to get all one's arrows into the 'window'. The slot 'window' is 8 inches wide and 3 feet long and should have its edges clearly marked. Arrows that land within the 'window' or are close enough to touch the marked edge of the window slot count one point.

NOVELTY SHOTS

Some novelty shoots include:

Popinjay: A 'parrot' (or some simulation there of) is placed at the top of a pole. Archers attempt to shoot the bird (or birds in some cases) off the pole and are given points for hitting wings etc. Since the archers are shooting straight up, and the arrows fall straight back down again, safety is a concern and specialized arrows with blunted tips are used.

Wand shoot: a peeled willow wand (1.5-2 inches wide) is set up at a distance and archers attempt to split it. This shoot can be simulated using tape placed in a strip vertically on the butt.

Flight Shooting: attempts to achieve maximum distance, not to necessarily hit a target

Speed shooting: attempting to shoot the maximum arrows possible in a specific time. May also involve accuracy or may be judged on who has the maximum arrows in the air at one time.

William Tell: the object is to hit the apple on the boy's head without hitting the boy. The boy is a picture target with either a drawn or a real apple above his head. This may be run as an elimination contest (hit the boy and you are eliminated) or by points with negative scores for hitting the boy.

SECTION 12: SOURCES

BOOKS

Some references to get you started.

A Bibliography of Archery

by F.Lake and H.Wright 1974
Simon Archery Foundation

A Guide to the Crossbow

by W.F.Patterson 1990
Society of Archer Antiquaries

A Method of Learning to Shoot in the English Longbow

by Bert Smith 1987
Published by the author

Arab Archery

by N.Faris and E.R.Amin 1945
Princeton University Press

Archery: Steps to Success and Teaching Archery: Steps to Success

by Kathleen M. Haywood and Catherine F. Lewis.
Modern target archery

Archery: The Longbow

Roe Adams, (Ed.) 1988
The Complete Anachronist, Vol. 37

Arrows Against Steel: The History of the Bow

by Vic Hurley 1975

Crossbows

by F.Bilson 1983
ISBN 0-88254-701-1
Hippocrene Books

History of Archery

by E.H.Burke 1971
ISBN 0-8371-5778-1
Greenwood Publishers, Westport, CT

History of the Crossbow

by M.C.Wilbur 1972
Shorey

Iolo's First Book of Crossbows

David R.Watson

Kyudo: The Essence and Practice of Japanese Archery

by H.Onuma 1993
ISBN 4-77001-1734-0
Kodansha Publishers, NY

Longbow: A Social and Military History

by Robert Hardy 1993

ISBN 1-55821-235-3

Lyons and Burford Publishers, NY

an overview of historic archery, with emphasis on the longbow at the height of its importance

Osprey Military Warrior Series#11: English Longbowman 1330-1515

by Clive Bartlett and Gerry Embleton

ISBN 1-85532-491-1

Saracen Archery

by J.D.Atham and W.F.Paterson 1970

Holland Press

Self Bows and Other Archery Tackle from the Tomb of Tutankhamun

by McLeod

ISBN 0-900416-33-5

David Brown, publisher, Bloomington, IN

The Archer's and Bowyer's Bible

H.L.Lawrence 1993

ISBN 0-385-42221-0

Doubleday, NY

The Book of the Longbow

by R.P.Elmer and C.A.Smart 1993

ISBN 1-56416-094-7

Derrydale Press, London

The Bowman's Handbook

William Paterson & Patrick Clover 1968

Portsmouth, UK

The Crossbow

by Sir Ralph Payne-Gallway 1996

Barnes and Noble Inc.

ISBN 0-76070-250-0

The Grey Goose Wing

by E.G. Heath 1971

Osprey Publications

Takes the reader to England and the history of the longbow.

Also by Heath: The History of Archery and Target Archery

The History of the English Crossbow

by D. Featherstone 1995

Barnes and Noble, NY

ISBN 1-56619-677-9

The Life and Times of the English Archer During the Hundred Years War

by Richard Ubert (aka Reinhard of Kosovo).1988

In: Archery: The Longbow, The Complete Anachronist, Vol. 37, 1988.

The Mary Rose

by M.Rule 1994

Naval Institute Press, Annapolis, MD

ISBN 0-87021-947-2

The Medieval Archer

by Jim Bradbury 1994

ISBN 0-85115-194-9

Boydell and Brewer, Rochester, NY

The Traditional Bowyers Bible Vol. 1 and 2

Bois d'Arc Press, Azle, Texas

The Witchery of Archery

by Maurice Thompson 1992

ISBN 1-56416-089-0

Derrydale Press, Lyon, MS

Toxophilus; Archery - Theory and Practice

by Roger Ascham

ISBN 1-56416-092-0

Derrydale Press, Lyon, MS

Also reprinted by the Simon Archery Foundation, Manchester, 1985.

Written in 1584 by a noble who was both a scribe and avid archer, Ascham helps us to better understand archery as it was practised in the 16th Century.

Turkish Archery

by Paul Klopsteg

ISBN 1-56416-093-9

Derrydale Press, Lyon, MS

MAGAZINE ARTICLES

McEwen, Miller and Bergman. June 1991. Early Bow Design and Construction. Scientific American

Foley, Palmer and Soedel. January 1985. The Crossbow. Scientific American

Grancsay, S.V. April, 1954. Just How Good Was Armour. True pp.44-46 and 89-92

VIDEOS

Archery: It's History and Forms

written by Mike Loads 1995

Running Wolk Productions

Available from: P.O.Box 10, Knebworth, England SG3 6PZ

ARCHERY PERIODICALS

INSTINCTIVE ARCHER MAGAZINE

P.O. Box 45299

Boise, ID

USA

83711-5299

Phone: (208) 465-9893

TRADITIONAL BOWHUNTER MAGAZINE

P.O. Box 15583

Boise, ID

USA

83715
Phone: (208) 362-0325

Longbows & Recurves Magazine
1828 Proper Street
Corinth, MS
USA
38834-5199
Phone: (601) 287-5003
Toll Free: 888-732-8784
email: longbows@longbows-recurves.com
Web site: <http://www.longbows-recurves.com>

Primitive Archer Magazine
P.O. Box 209-1
Lufkin, TX
USA
75902-0209
Phone: (409) 632-8746
Website: <http://pioneerpc.com/primitivearcher/>
Users can subscribe online.

WEB SITES

SCA archery:
<http://www.pbm.com/~lindahl/archery/html>

The Stickbow site:
<http://www.stickbow.com/>
Traditional archery site with information on arrow and bow making, history of archery, archery classifieds and a chat group.

General archery site:
<http://www.stud.ux.his.no/~morten-b/archery.html>
Contains modern and historical archery information with sections on Mongols, the Crusades, English Archery, 100 Years War, William Tell and Robin Hood, archery publications, equipment and beginner archery

Saxon archery:
<http://www.fttech.net/~regia/saxarch.htm>

Archery of al-Islam:
<http://www.pbm.com/~lindahl/cariadoc/archery/html>

The Maryrose:
<http://www.maryrose.org/index.html>

General medieval archery including excellent articles reprinted from the journal of the Society of Archer Antiquaries:
<http://snt.student.utwente.nl/campus/sagi> to get to the article reprints add /artikel

Collection of Rialto archery articles:
<http://www.pbm.com/~lindahl/rialto/idxarchery.html>

Gwyntarian Archer's Guild: includes historic information, interesting links and articles from 'The Bodkin's Point' (SCA and historic archery articles):
<http://web.raex.com/~agincort/gag.html>

University of Toronto archery site: mostly modern information, used equipment swap shop, many links to other sites, FAQ's
<http://www.utoronto.ca/archery/faq17.htm>

New World Arbalest (crossbow manufacturer)
<http://www.moontower.com/crossbow/index.html>

Crossbow site: crossbow FAQ's, links, some history and sources:
<http://www.ee.nmt.edu/~roy/crossbows.html>

LISTSERVS

e-mail lists are available which cover target, combat archery and thrown weapons. To subscribe to the various lists send message to: listserv@wyvernhall.com

in the body to subscribe to the archery list include:
subscribe sca-archery (your name here)

for missile combat include:
subscribe sca-missilecombat (your name here)

and for thrown weapons include:
subscribe sca-thrownweapons (your name here)

NON-SCA ARCHERY ASSOCIATIONS

Society of Archer Antiquaries

Douglas Elmy
61 Lambert Rd.
Bridlington, North Humberside
England
Or
2444 N. Abbe Rd.
Fairview, MI 48621

Canadian Field Archery Association

c/o Larry Patterson
63 Cardinal Dr.
Hamilton, ON
L9A 4H6

Federation of Canadian Archers

1600 James Naismith Drive
Gloucester, ON
K1B 5N4
(613) 748-5604
Executive Director: Brian McPherson
Technical Director: Pascal Colmaire
email: FCA@cyberus.ca

Note: this organization offers the archery coaching certification program which many SCA marshals have found useful

The British Longbow Society

65 Chiltern Close
North Common
Warmley

Bristol
BS15 5UL

Ontario Association of Archers
P.O.Box 2612
Sudbury, ON
P3A 5J2

ARCHERY SUPPLIERS

The following list is by no means all inclusive, but it will get you started. No recommendation of the supplier is implied by its inclusion in this list. Exclusion of a supplier does not mean it is not recommended, only that we weren't aware of it at publication.

Web site for bow sources (primarily designed for archers interested in combat archery, US sources mainly):
www.angelfire.com/tx/adod/netbow.html

Martin Archery Inc.:
general information, recurves and longbows.
<http://www.martinarchery.com> .

Three Rivers Archery
traditional archery equipment -in the US.
<http://www.3riversarchery.com>

Toronto Archery Supply
Stan Siatkowski
98 Foxwell St. in the St. Clair and Scarlett Rd.area.
new and used bows and can order anything else
please call first (416) 767-1649

Gerry Lee
custom arrows and arrow-making supplies
Burlington
905-639-2405

Near North Outfitters
Box 100 Unit 3 - Hwy 6 south and 401
Morrison, ON N0B 2C0
519-822-4274

Tent City
1600 Steeles Ave. West of Dufferin
a selection of recurves and archery supplies.

The Archers Nook
90 Charterhouse Cres.
London, Ontario
<http://execulink.com/~archnook/> - do mail order on-line.

Stephen of Two Falls, Bowyer/Fletcher
mka Stephen Fraser
authentic reproductions of medieval English longbows made of Yew (with deer antler nocks and Irish linen strings),
period fletching (hardwood shafts, Grey Goose feathers bound onto the shaft with silk thread, and regular glue-on field
points)
89 Richard Street,

Bracebridge, Ontario
P1L 1J1
705-645-1495

Mid-North Archery

R.R.#3, Site 32, Box 49, Sudbury P3E 4N1
(705) 695-2783

archery shop on Hwy 69 in Estaire, ~20 km S of Sudbury. 20m indoor range and 40-target 3D outdoor range in the forest during the summer. Good for basics

Mohawk Archery

Box 486, Mactier, Ontario P0C 1H0
(705) 375 5560

traditional equipment, both supplies the materials and makes wooden arrows

UK Suppliers

Contacts may be a little old by now and may need checking.

Bowyers

Chris Paine, 53 Carlyon Avenue, Harrow, Middlesex HA2 8ST (0181 864 7819)
laminated English longbows to order, with your choice of length, weight and woods

David Smith, Banbury Road, Brackley, Northamptonshire NN13 6AX (01280-706802)

Jack Greene Longbows Jack Greene, The Old Chapel, Wookey Hole, Wells, Somerset BA5 1BP (01749-670096)
Traditional self bows, including yew. Also linen or silk for strings and a variety of fletching and leatherworking tools.

Shafts

Graham Bradford, 45 Ridge Rd., Letchworth, Herts. SG6 1PS (01462 485366)
Arrowmaker as well as supplier of shafts, including 3/8" ash.

Piles

The Archery Centre, Tom Foy, Highgate Hill, Hawkhurst, Kent TN18 4LG (01580-752808)
general supply shop, line of machine made short square-bodkins and hand forged bodkins and broadheads.

Hector Cole The Mead, Great Somerford, Chippenham, Wiltshire SN15 5JB (01666-825794)
Blade and arrowsmith.

Grant Newell Old Fishery Cottage, Old Fishery Lane, Boxmoor, Hemel Hempstead, Herts. HP1 2BN (01442 62138)
Arrowsmith producing mild steel replica piles based on the first 16 types listed in the London Museum medieval catalogue. New to the business 1995.

Ealdormere Archery Event Report

To be completed by the Marshal in Charge for the event and submitted to the Archer General within two weeks of the event. A copy of the report should be maintained in the files of the sponsoring group's archery marshal. A copy should also go to the sponsoring group's seneschal. Any injuries requiring a doctor's care should be reported to the Archer General and Earl Marshal within 24 hours.

Event _____

Location _____

Sponsoring Group _____

Marshal in Charge _____

Phone _____

Address _____

e-mail _____

Event Autocrat _____

Types of Shoots _____

Number of Archers Participating _____

Names of Event Winners _____

Other marshals assisting _____

MIT Training or Archer Instruction _____

Other Information (injuries, difficulties, what went particularly well etc.) _____

Signature of MIC _____

Use back of sheet if necessary.

Ealdormere Archery Marshal Application Form

Please print or type all information clearly.

All applicants must be at least 18 years old and a member of the Society for Creative Anachronism.

Marshals-in-training (MIT's) must register contact and background information with the Archer General prior to performing any official SCA duties. MIT's should discuss their specific training requirements with the Archer General as credit will be given for previous experience. If the applicant has no previous experience, then the training procedure is as outlined below. MIT's must be supervised by a warranted marshal at all times. All marshals and MIT's are responsible for the information contained in the Ealdormere Archery Handbook (except for the historical and source sections).

Contact Information:

Modern name: _____

Address: _____

e-mail: _____

SCA Information:

Membership expiration date: _____

Name: _____

Group affiliation (if any): _____

Past Experience: Please outline any relevant previous experience (eg. NCCP training course, marshal in other kingdom or previously, extensive SCA or non-SCA shooting) _____

Marshal in Training Experience: the MIT must obtain a minimum of 3 training experiences in each of the following areas. Note to supervising marshals: **do not sign this form unless you feel that the experience has made a significant contribution to her/his training with a discussion of relevant points. Manual labour, such as carrying butts does not count as a significant contribution.**

1. Equipment inspection: It is highly recommended that at least one inspection session is at a major archery event such as the Pennsic War.

Event _____ Supervising marshal _____ Date _____

Event _____ Supervising marshal _____ Date _____

Event _____ Supervising marshal _____ Date _____

2. Running a range:

Event _____ Supervising marshal _____ Date _____

Event _____ Supervising marshal _____ Date _____

Event _____ Supervising marshal _____ Date _____

3. Setting up a range: (note: no more than 2 MIT's may receive credit for range set up at the same event)

Event _____ Supervising marshal _____ Date _____

Event _____ Supervising marshal _____ Date _____

Event _____ Supervising marshal _____ Date _____

After completing the training all MIT's must complete a written test. No more than 3 incorrect answers are permitted.

I hereby certify that I have completed training, am a member of the SCA, am familiar with the relevant information in the archery handbook and feel I am competent to become a warranted archery marshal:

Applicant's Legal Signature: _____ Date: _____

Test Score _____ Date _____

Archer General's authorization: _____ Date: _____

