

The Clout Book



from Epping Foresters

“There should be a book on Clout.”

Pam Thurlow



Pam Thurlow was a member of our club and close friend for eight years. She was a passionate and dedicated archer who represented Australia at The New Zealand National Titles. She was twice a member of The New South Wales Women's Archery Team and also competed as an independent archer in the coveted London Indoor Archery Championships. Pam also became a National Judge and officiated at many tournaments, including a number of Junior National and State Titles.

Pam particularly enjoyed shooting in 'Clout' events and prior to her death in 1993, after losing her battle against cancer, she expressed a desire for Epping Foresters Archery Club to promote this form of archery. One of the last comments she made before her death was: "There should be a book on clout." This book has been prepared to provide basic information and instruction with the hope that more archers and clubs may become interested in shooting this historic discipline of archery. It is to her memory that it is dedicated.

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The History of Clout

In olden times, when the bow was used as a weapon of war at famous battles such as Crecy in 1346 and Agincourt in 1415, archers en-masse would shoot arrows into the air towards attacking cavalry and infantry. Practice was obtained by shooting at a white cloth stretched on a wooden frame 3 feet square approximately 90cm at a distance of 10 score paces, about 180 metres.

The Old English word for cloth was 'Clout'. Today we shoot up to that distance and instead of a cloth we shoot at a much smaller inverted triangular target. Now, this form of archery is shot purely as a test of skill for friendly competition (Fig 1 on page 7).

Safety First

Like all forms of archery, safety must be the paramount consideration. Modern bows can propel an arrow, in some cases, in excess of four hundred metres. Therefore it is imperative for anyone who has not shot Clout before to ensure that they initially shoot short of the Clout and then adjust their aim by increasing their trajectory by small amounts over a number of shots until the necessary distance is found.

A small adjustment to the angle required to shoot your maximum target distance should be a safe starting point. Young or inexperienced archers should be under strict supervision during this range finding process.

Because of the extra distance involved, added care and safety precautions are necessary to prevent accidents to onlookers and unwary members of the public. An arrow shot in the distance can be invisible and inaudible. Archers must be under the control of a Shooting Captain at all times.

Prominent warning signs should be set in place around the archery field, with particular reference to the area behind the Clout and to the sides of the shooting range. The use of coloured bunting can also be used to prevent people from crossing the field whilst shooting is in progress. There must be sufficient space behind the Clout and to its sides to ensure that a stray arrow will not cause injury or damage property. Even if no injury or damage were to occur, an arrow into a

neighbouring yard or property could cause the club to lose its shooting ground and would give our sport bad publicity.

With regard to Distances, Rules, Regulations and Specifications, it is not proposed to cover these issues in this book, as they are clearly set out in The Clout Section of *The Archery Association Of Australia Inc. - Constitution and Rules*. All archers intending to shoot Clout should acquaint themselves with this section.

Shooting Technique

The technique for shooting Clout is similar to that used for target shooting, but there are some aspects which need to be addressed.

Feet

Your feet should be in the same place for each shot. A 25 mm (1") shift in the position of the feet using close ground markers, as in Fig 6 on page 11, means a 200 mm (8") change in arrow position at the Clout. It is essential that their position be marked with 'foot markers' (Fig 2 on page 7). Brightly coloured golf tees make good foot markers and are best placed directly in front of your big toes.

There is a natural tendency to move your feet especially after release. When archers move to look through their telescopes, they often move their feet without realising. A slight change in foot position can have a significant effect on consistent grouping of arrows at the Clout.

Stance and Body Attitude

As with target shooting, the archer's body weight is distributed evenly between both feet which are separated enough to maintain stability and comfort (a distance about the same width as the archer's shoulders is a good starting point).

The bow is lifted and drawn as in target shooting (Fig 3a on page 7). Elevation is then achieved by **bending backwards from the waist**, not by raising the bow arm. Bending from the waist, whilst at full draw, enables the body to remain braced, thus distributing the bow's combined draw weight and mass weight between both arms and the upper body. A solid platform which enables the archer to hold the sight steady on the Clout or aiming point is now achieved (Fig 3b on page 7).

Draw Length

Consistent draw length is necessary to obtain closely grouped arrows in all forms of archery. Because of the increased distances involved in Clout shooting, the effects of inconsistent draw lengths become more pronounced. Particular care must, therefore, be taken not to overdraw the arrow or to allow it to 'creep' forward prior to release. Arrows going too high, or too low will result.

Follow Through

Make sure the full draw position is held well after releasing the arrow. Dropping the bow arm or relaxing the stance too early will affect accuracy. Do not be tempted to hurry the shot or to move quickly from the draw position to have a look at where the arrow has landed. Remember to take your time.

Methods of Sighting

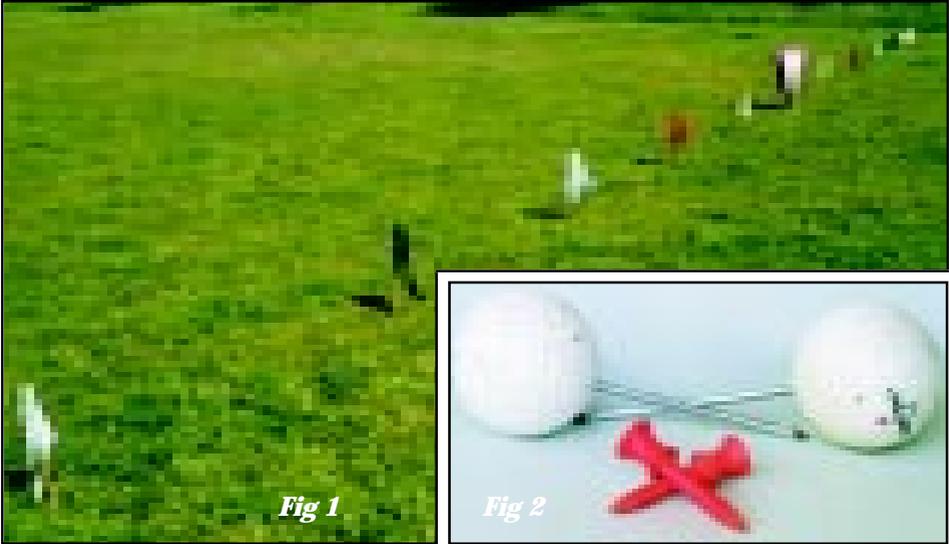
As previously mentioned, it is necessary to incline the bow at an angle in excess of that used to shoot your maximum target distance, to achieve sufficient trajectory to propel the arrow to the Clout. It will soon be seen that when the bow is inclined to achieve greater trajectory, the archer's bow arm and bow hand obscure the required position of a sighting mark or bowsight. Therefore an alternate method of sighting to that used in target shooting is required.

Pin Sights

Unless you already have a Clout sight, start by using a pin on the bow to establish a point of reference to enable you to shoot one or more of the following methods of sighting, explained in the following pages.

As the bow arm prevents the archer from aiming directly at the Clout, it is necessary, in this method of sighting, to locate the pin on the lower part of the bow handle with a piece of tape (Fig 4a on page 10,) on the opposite side of the bow handle to that normally occupied by your target sight.

If desired, a more elaborate sight can be used (Fig 4b on page 10). Because this sight is to the right of the bow handle, for the right handed shooter, left side for the left handed shooter, it is necessary to aim for a flag on that side of the Clout to which the Clout sight is on.



As previously mentioned, the initial position of this sight pin should not be much lower down the bow handle than the position of the sight pin for the maximum target distance shot. Further adjustments can be made, a little at a time, from there until the arrow lands level with the Clout.

Lateral Adjustment is then achieved by moving the pin in and out from the bow handle and/or altering your point of aim and sighting on a different flag or moving your ground marker, if using one. If the arrow lands one colour to the right of the Clout, it is necessary to aim at the next flag to the left. An adjustment of only 5 mm to the right or left is approximately equal to a movement of one colour for the point of impact of the arrow in the Clout area.

The main advantages of this method are that it is simple and less prone to mechanical failure than some other methods. It is not affected by rain, where some other forms of sighting are disadvantaged, and it does not add noticeably to the overall weight of the bow.

Some of the disadvantages of this method of sighting are that there is no positive string alignment. On compound bows, the peepsight used for normal target shooting is usually too far out of position to be used. Because of the position of the bow arm, the Clout cannot be aimed at directly and flags can sometimes be difficult to see. The pin could stick into the bowhand if care is not used. The pin can also be moved in, or out by accident.

Point-of-aim Method

This method is usually used when flags or ground markers cannot be seen, such as dull or rainy days. A prominent mark or object directly behind or to the right of the flags to the right of the Clout for the right handed archer, the reverse for the left handed archer should be selected. Care should be taken not to select an aiming point which could move.

Many years ago, an archer employing this method of sighting selected an open window in a block of home units across the road from the rear of the ground. Being the only one open it was very prominent. The story goes that all was going well for this particular archer until the owner of the home unit closed the window, thus making it impossible to say where the aiming mark had been.

Ground markers (a) (Fig 5 on page 11) can be used instead of aiming at the flags, but because of the distances involved and the restrictions on their size, they are sometimes difficult to see from the shooting line.

They must be a maximum of 75 mm in diameter and be no higher than 150 mm from ground level. As well as having size restrictions they are not permitted in the scoring zone. Ground markers have further limitations in that they cannot be moved or repositioned whilst shooting is in progress, therefore, major aiming changes, due to wind shifts, and other weather conditions can be a problem.

Other archers accidentally kicking them over or moving them can cause further problems. However, they can be brightly coloured, faced towards the sun and the use of magnifying lenses in Clout sights can be of assistance in seeing them. Minor sighting adjustments can then be made by moving the pin.

Ground marker (b) (Fig 6 on page 11) can be used by placing an arrow at the shooting line, pointing towards the black flag. Stand behind the arrow and position your ground marker approximately 20 metres towards the black flag. The right hand black flag is used for right handed archers, whereas the left side black flag is selected for a left handed archer. This can be seen clearly in Fig 7 on page 10 with the dimensions changed for photographic purposes.

To determine the sight pin position, hold the bow up to the original position stated in Pin Sights, hold the bow still and move the pin down the bow handle (Fig 8a on page 11) until it is aligned with the ground marker and shoot a few arrows to get a reference point for sighting. If you prefer, a more elaborate sight can be used (Fig 8b on page 11).

To make major changes move the ground marker closer to, or further from, the shooting line to adjust for distance. When the correct distance is obtained, pace out the distance to the ground marker from the shooting line and write the number of paces down for future reference. Large changes can be made by moving the ground marker sideways to adjust for lateral alignment. Remember that a lateral movement of the marker by 12 cm will affect a movement at the Clout of approximately 1 metre. Minor changes can now be done with the sight pin

At such a reduced distance, a smaller ground marker can be used. A brightly coloured golf ball with a large nail or a metal spike driven through it makes a good ground marker for this comparatively short distance (Fig 6 on page 11).

The main advantages of these methods are that the sight pin is below the bow hand. Corrections are calculable and the point of aim is not obscured by rain or dull light conditions.

The main disadvantage of these methods is that they are complicated. A comparatively small movement of the ground marker near the shooting line has a large effect in relation to where the arrow lands in the 'Clout area'.



Fig 4a



Fig 4b



Fig 7



Fig 5

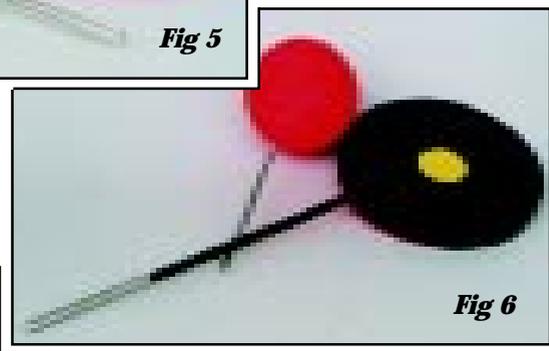
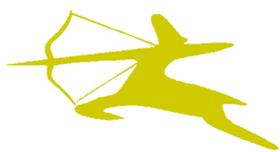


Fig 6



Fig 8a



Fig 8b

This method can be affected by varying levels of various shooting grounds. Again, there is no positive string alignment and for the compound bow shooter, a peep site, located on the bow string for target shooting, becomes well above the level of the archer's aiming eye. Somebody moving or accidentally kicking your ground marker can also cause problems.

Prism Method

A properly constructed prism (Fig 9 on page 14) has the ability of bending the line of vision, so by mounting a prism with a face angle of 30° on the normal target sight-bar, it is possible to aim at the Clout, flags or ground marker, as per target shooting.

This is a sighting method which has lost popularity and is seldom used these days. They are difficult to make and distortion of image can be experienced because of rainbow effect and flaring, caused by the position of the sun.

Also, in the past, the better quality prisms were made out of glass which was difficult to drill in order to affix brackets for attaching them to sight bars. Glass has the further disadvantages of being easily chipped or broken, it is heavy and is difficult to grind and polish.

Even with the event of high quality Optical Plastic which is much lighter and far more durable than glass, again, because of the difficulty in making them and their comparatively poor quality of image compared to other forms of sighting, the prism sight has become little more than a museum-piece.

Mirror Sight Method

This is currently the most popular form of sighting method (Figs 10 and 11 on page 14). By using two almost parallel mirrors, suitably mounted on the bow or bow sight bar, it is possible to aim directly at the Clout, flags or a ground marker (Fig 5 on page 11). The principle is exactly the same as that employed in a periscope. Adjustment for length of shot is made by either altering the relative angles of the mirrors (Fig 11 on page 14) and/or by changing the height of the sight's position vertically on the sight bar (Fig 10 on page 14). A 1mm change in the mirror angle will change the distance by approximately 5 metres.

Lateral alterations in sighting can be made by having a number of aiming points marked on one of the mirrors (Fig 11 on page 14), the use of an adjustable sight pin in front or behind the mirrors (Fig 10 on page 14), or by aiming at the flags, or a ground marker as previously described.

The main advantages of this method of sighting are that the archer is able to aim directly at the target. At the same time, string alignment is normal and for the compound bow archer the same peepsight in the string as is used for target shooting. Adjustments in aiming are finer and more accurate and can be done on the shooting line as needed. The archer, therefore, has more control.

Mirror sights lend themselves to the addition of sighting aids which are not possible with previously mentioned methods, like the drawing or etching of a lateral line across the back of the lower mirror (Fig 11 on page 14). Marking the face of the mirror creates a double image.

When aligned simultaneously with the base of the Clout post, where it enters the ground and the point or points where one or more of the flags' posts enter the ground at the time of release, can assist in obtaining consistent length of shot.

This form of sighting also lends itself to the use of a magnifying sight scope, as used by many compound target archers, and a spirit level to help prevent leaning 'canted' the bow to one side.

The main disadvantages of this method of sighting are that these sights are usually handmade, but many archers choose to make their own, varying their design to suit their own method of attaching the mirror sight to their equipment. Therefore, if another archer makes or sells you one it will probably be necessary for some form of adjustment or alteration to have been made so you can shoot with it on your bow. As the mirrors are usually made of glass, there is always the risk of damage if the sight is dropped or treated roughly.

The added weight of the sight can increase the chance of something vibrating loose when shooting. Because of the weight of these sights, extra strain is put on the sight mountings which may cause problems. They must be robustly made and attached.

Some form of shock or vibration, dampening and safeguard against nuts, bolts and screws vibrating loose should be incorporated in the sight's construction and mounting. This could be with the use of rubber washers, locknuts, 'locktight' and 'contact-adhesive' or thick double-sided tape in preference to glue which sets hard and brittle.

The extra weight of the mirror sight may have the effect of throwing the bow off to one side on release. This latter effect is more noticeable with bows without adequate stabilisation. This problem can be reduced by moving the mirror sight closer to the bow handle than perhaps the position the archer may adopt for a target sight.



Fig 9



Fig 10



Fig 11



Fig 12

Sometimes the main stabilising rod will obstruct the archer's view through the mirror sight. To remedy this problem a shorter stabiliser rod can be used. Another alternative is to relocate the rod by the use of a simple offset bracket as shown in Fig 12 on page 14.

Rain drops can block out images through prism and mirror sights. For this reason it is desirable to have another tried and tested method of aiming to fall back on for wet days.

Mirrors reduce the image size of the Clout and flags. One has only to look through a mirror sight at the Clout and flags and then look at them from the same position without looking through the mirror sight, by moving the eyes down to see the extent of the reduction in size.

Stand approximately 63cm in front of the bathroom mirror. By using a ruler you will see that the image of your face is now approximately 50% smaller if you measure your face's reflection against the mirror. To compensate for this image reduction many archers choose to install a magnifying sight.

A magnification of 0.75x which, at full draw, becomes a magnification of approximately 3.00x is popular. Problems with clarity can be experienced under increased magnification. Magnifying devices are not allowed on recurve bows.

Practice Ends

It is a good idea to number and shoot your arrows in order. In this way the archer can gauge the relationship between measured and recorded movement of the aiming point or the sight-pin and the corresponding amount of change to the impact position of the next arrow.

Once this knowledge is learned, the distance from the last shot arrow can be paced out from the Clout and the sight pin or aiming point adjusted accordingly, to get your arrows close to the Clout. Arrows left and right of the Clout are much more easily seen either with the naked eye or with the aid of a telescope.

Lateral adjustment, depending on your method of sighting, can also be gauged by shooting your arrows in order taking note of the amount of adjustment used and the corresponding change in arrow impact position.

Never be in a rush to shoot your arrows. Before the shoot or tournament, find out who are the best shooters and make a mental note of the colour of their fletches and nocks. Let them shoot before you. Spot their arrows through your telescope and you may get an idea of how much the wind, if any, is affecting the arrows so you can adjust accordingly.

Tie a light ribbon to your tripod to act as a wind detector. Look for wind gusts in the tops of trees, behind and to the sides of the Clout and the flags themselves. You can either alter your aiming point or adjust your sight accordingly before your first shot. This can also be done with following shots.

Telescopes & Binoculars

Because of the distance involved, it is not usually possible to see where the arrows have landed without the aid of a telescope. Otherwise, adjustments can only be made after shooting six arrows and walking up to the Clout to see where they have landed.

Unfortunately, telescopes are usually quite expensive, but, like good quality archery equipment, if you look after them, they will provide good service for many years. Sometimes, good second-hand bargains can be found.

A minimum magnification of 15x is needed to clearly identify arrows at the Clout. Most 'spotting telescopes' have around the 20x magnification mark. If an archer was considering buying a new or a good second hand telescope; higher magnification would assist you in finding your arrows.

By reducing the magnification, a wider view is obtained providing you with a better understanding as to where your arrows are landing in relation to the Clout. Because of the magnification needed, a sturdy tripod to hold your telescope or binoculars steady on the Clout is necessary for you to keep an arrow by arrow account of your shooting.

It is a good idea to tie your telescope down on windy days. Many an expensive telescope or pair of binoculars have been damaged when a gust of wind has blown tripods over. Telescopes, because of their monocular vision, unfortunately often cause archers difficulty in estimating length of shot. The higher the magnification the greater the reduction in depth of field.

Binoculars are superior in this regard but usually their magnification is insufficient. This is because binoculars are generally designed to be hand held. Magnifications over 10x are very difficult to hold still enough to see small objects such as nocks or fletches of an arrow 180 metres away unless they are mounted on a tripod.

Assessing Each Shot

During the practice ends, try to pick up a distinctive patch such as a darker or lighter patch of grass or a bare patch which is just short of the Clout and another just to the side of the Clout and a little past it. If you can see them through your telescope you may be able to judge whether your arrows are short or long.

An arrow that contacts the ground lower than where the Clout post enters the ground is shot short. Conversely, an arrow that contacts the ground higher than where the Clout post enters the ground is shot long. By pacing out the distance between the patches of bare ground and the Clout you will have an idea of how short or long your arrow is falling.

Not Reaching the Clout

With the tremendous advances in bow design in the last 20 years or so this problem is not as common as it used to be. Maximum trajectory is obtained when the bow is inclined at approximately 43°. An angle of elevation in excess of this will make the arrow shoot too high and therefore fall short. Likewise, if not enough elevation is gained, the arrow's trajectory or path would be too flat and the arrow would fall short.

If after checking the archer's angle of elevation, the arrows were still falling short, the archer could try increasing the draw weight of the bow. Smaller fletches or a lighter set of arrows may also be tried. A lighter string can also give an arrow a greater cast. If all these suggestions fail it may well be that a faster or more powerful bow may be necessary.

Arrows going too flat, and/or skipping

With advances in technology, modern bows usually shoot arrows to the Clout with comparative ease. Therefore, problems with arrows going short or long at the Clout line and skipping on hard ground have become more common in recent times.

Bullet shaped points, which are popular for Target shooting, present a smooth rounded contact point to the ground if shot at a low trajectory. In times past, 'chisel' shaped points were popular for Target, Field and Clout shooting. Because of their lower shoulder and sharper point they did not skip as much as arrows shot with bullet points.

As mentioned earlier, bows in the past were slower and angles of penetration were steeper. Fitting arrows with field points, which are usually heavier than target points and have a 'micro' chisel point, cause the arrow to enter the ground at a steeper angle. The shape of the field point tends to catch the ground instead of skipping. Increasing the size or the number of fletches also slows the arrow down causing it to penetrate the ground at a steeper angle. A steeper angle of penetration will reduce the incidence of short and long shots at the Clout.

To understand this concept, hold a flat circular dinner plate out in front of you just below eye level. You will see that the circular plate appears to be an ellipse or an oval shape. This is the view from an arrow with a flat trajectory. Now lower the circular plate. It can now be seen that the target area has increased to a more circular shape. This is the view from an arrow with a higher trajectory.

Therefore, the higher shot arrow has a larger area in which to land and has less chance of flying over, or under, the high scoring zones. But alas, an arrow shot high is more affected by wind as is one with larger fletches. Finding the optimum combination is something archers must do themselves as it seems to be an individual thing.

Scoring

Care must be taken when approaching the Clout or scoring area. The nock ends of arrows are hard to see and are as sharp as the point. To avoid injury and damage to arrows, archers should **enter the scoring area from the side**. An arrow is easier to see from the side.

Ten-ringed scoring, is most easily done with eleven people. A cord, called the Clout Cord, is connected to the base of the Clout post. This cord is coloured and marked in the same colours and measurements as the flags in the scoring area.

One person stretches the Clout Cord and slowly walks around the circumference of the scoring circle. As the Cord is rotated, it comes in contact with ar-

rows. The score of the arrow is determined by the intersection point of the Clout Cord and where the arrow disappears from view into the target.

A person is positioned in each scoring zone and is responsible for pulling out arrows which fall into their allocated scoring zone. On completion of the sweep of the Clout Cord, all arrows have been removed, and are arranged in their values for scoring.

The arrows are laid between the flags, the fletches of the even scoring arrows pointing towards the shooting line and the odd values pointing the opposite way. Archers then call out their scores while picking up their arrows. You may not have the numbers at your club to fully man the Clout Cord but it can be operated with as few as two or three people.

Good Shooting

The members of Epping Foresters Archery Club trust that you have found this information on Clout shooting interesting and informative. We hope that this information has encouraged those of you who have never tried shooting this form of Archery to give it a try.

We also hope you will enjoy it and we look forward to seeing you at the Clout Tournaments in the future. For further information please contact your State Society or us at PO Box 450, EPPING NSW 1710.

Understanding and Enjoying the Art of Clout Shooting

**A Book Presented by Epping Foresters
Photography by G Leader**