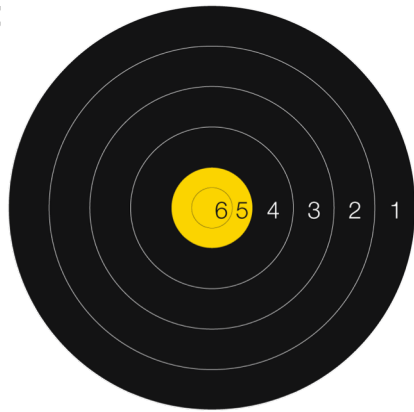

COACHING FOR PERFORMANCE IN FIELD ARCHERY

JOHN HARTFIELD



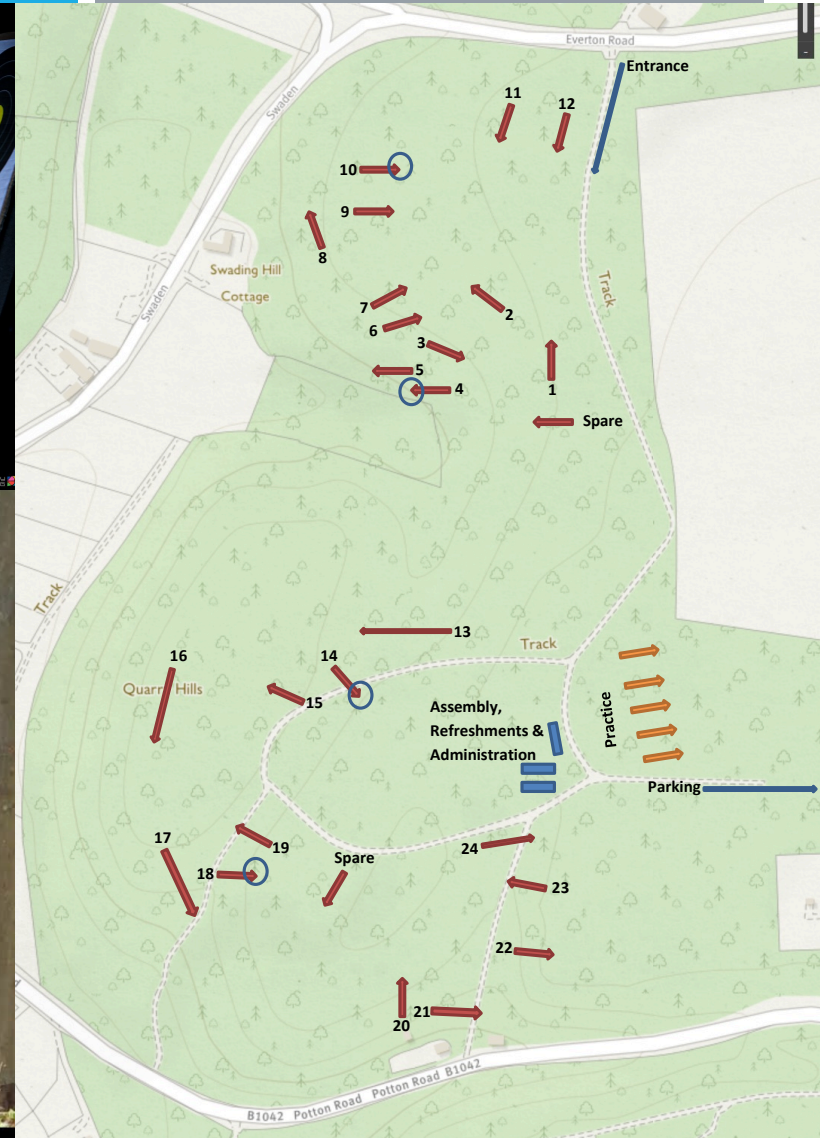
WHO AM I – JOHN HARTFIELD

- An archer for 46 years
- Qualified as County Coach – 1988
- Representation;
 - World Field Championships 1990 – Placed 5th
 - World Indoor championships 1991 – Placed 12th
 - ArcheryGB Field Committee - 2015 – 2019
- Bow Styles shot;
 - Longbow
 - Barebow
 - Recurve
 - Compound



WHAT IS FIELD ARCHERY

- Shooting at a range of targets (24) laid on a course, typically woodland where archers move from one target to the next
- Each target is a different distance
- Positioned at different rotations, angles heights and terrain
- Each target has a clear shot and is positioned to be safe for archers, judges and spectators
- Shots can be through tree lined avenues, over lakes, up or down slopes, from rock ledges and across valleys
- 2 Event types
 - 3D
 - Round 6 zone targets



NOTABLE COMPETITORS

- Brady Ellison
- Amy Oliver
- Jonathon Shales
- Alan Wills
- Hope Greenwood
- Chris White
- Trish Lovell
- Jason Meehan



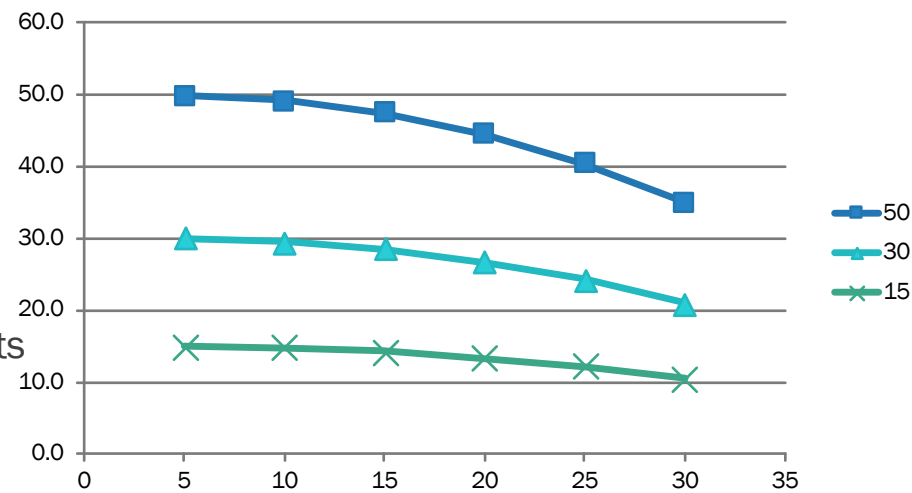
BASIC REQUIREMENTS FOR FIELD

- Posture
- Stance
- Alignment
- Balance
- Endurance
- Resilience
- Equipment
- Tuning
- Spares
- Protection
- Refreshments



CHALLENGES SPECIFIC TO FIELD ARCHERY

- Awareness of cross slopes and drift effects
- Managing sight mark cuts for down slopes
- Drift due to wind from one target to the next
- Arrow impact alignment from long to short distances
- Coping with body alignment for uphill shots
- Estimating distances
- Navigating the course
- Handling weather
- The effects of sun
- Food and Refreshments



KEY EQUIPMENT DIFFERENCES IN FIELD ARCHERY

- Barebow
 - 5 to 50m tuning for centre shot
 - stringwalking
- Recurve
 - Walkback tuning
 - Gauging systems
 - Sight Apertures
- Compound
 - Sight 3rd Axis
 - Gauging system
 - Clarifier
- Instinctive
 - As Barebow but wooden riser and no stringwalking
- Traditional
 - As Barebow but wooden arrows, no Button and no stringwalking
- Longbow
 - No sighting systems

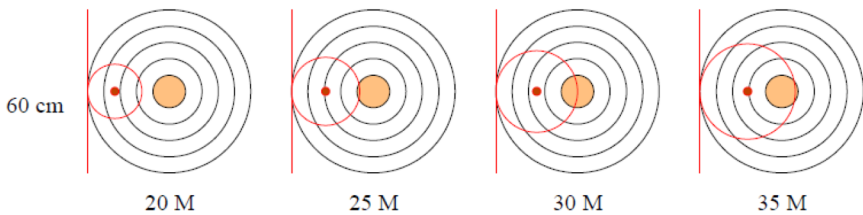
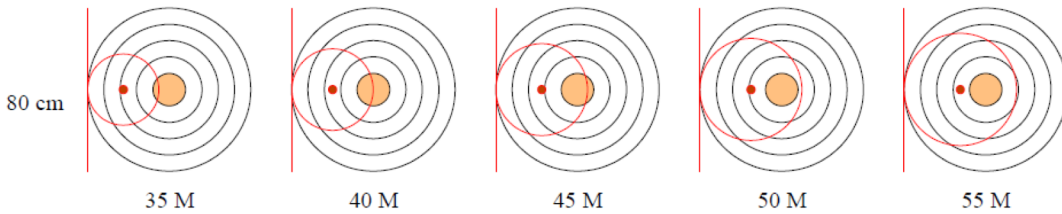


GAUGING DISTANCES

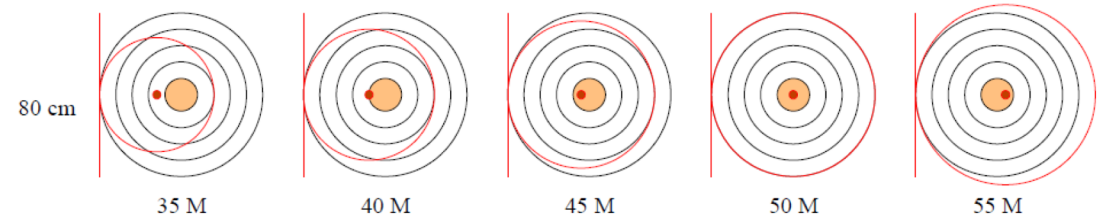
- Using marks and objects such as trees
- Dead Ground effects
- Gauging using Sight or other parts of the bow, 2 different solutions shown below
- Fingers and thumbs



05/03/2020
Full 80 cm face is covered at 80 Metres



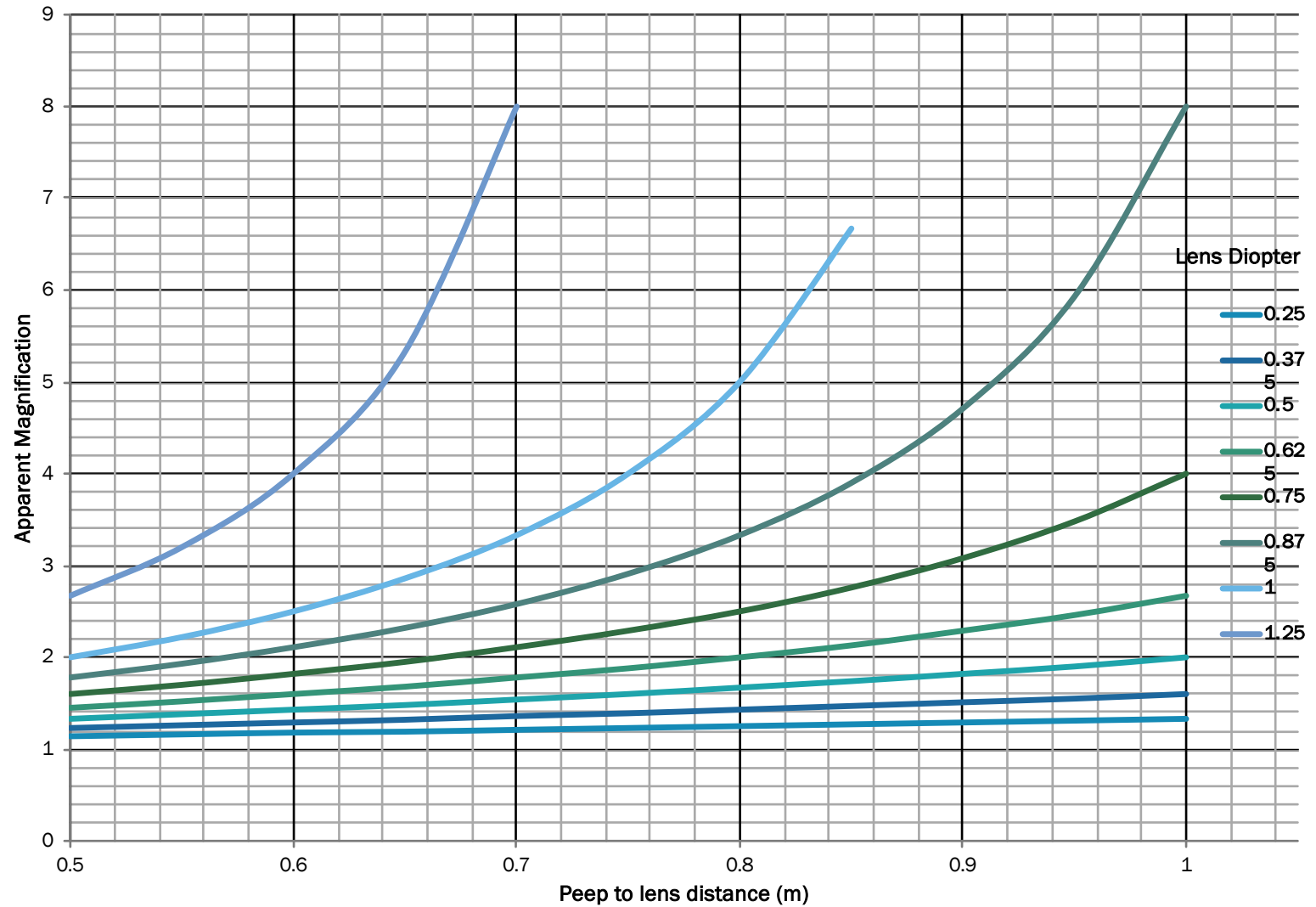
Full 80 cm face is covered at 50 Metres



LENS MAGNIFICATION

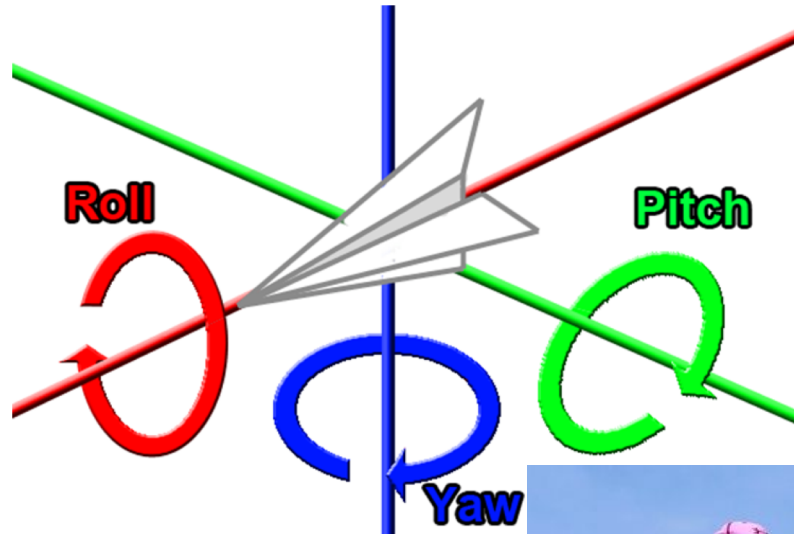
WITHOUT CLARIFIER

- Gauging system for Field
 - 1:100 (50cm on face = 50M distance)
 - 8:500 (each 8cm ring = 5m Distance)
 - Select lenses and peep to scope distance to achieve required magnification
- Magnification = $1/(1 - (\text{Dioptre} * \text{Distance}))$



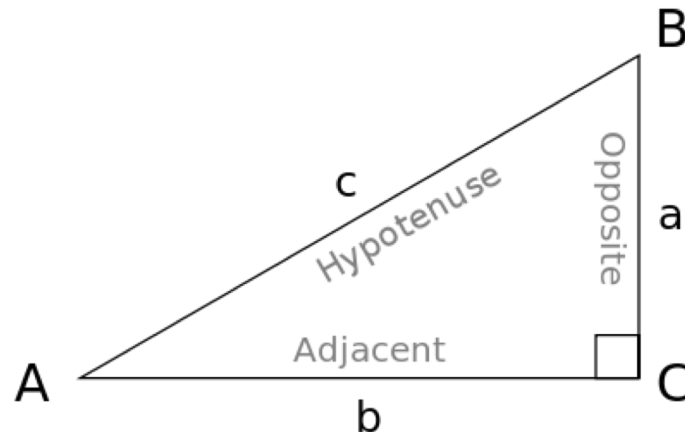
SLOPES

- ❑ Awareness of cross slopes and drift effects
- ❑ Trigonometry
- ❑ Gravity
- ❑ Draw Length
- ❑ Push / Pull effects
- ❑ Body Angle, Shoulder Alignment
- ❑ Pitch, Yaw & Roll
 - ❑ ESAR
 - ❑ DFL
 - ❑ String Alignment



DEALING WITH SLOPES – UP HILL AND DOWN

- Slopes create a geometric change in the effective distance that the target is from the archer
 - A to B is measured distance
 - A to C is equivalent distance on the flat

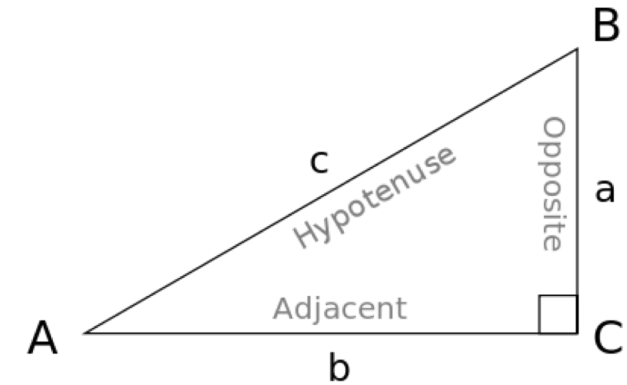
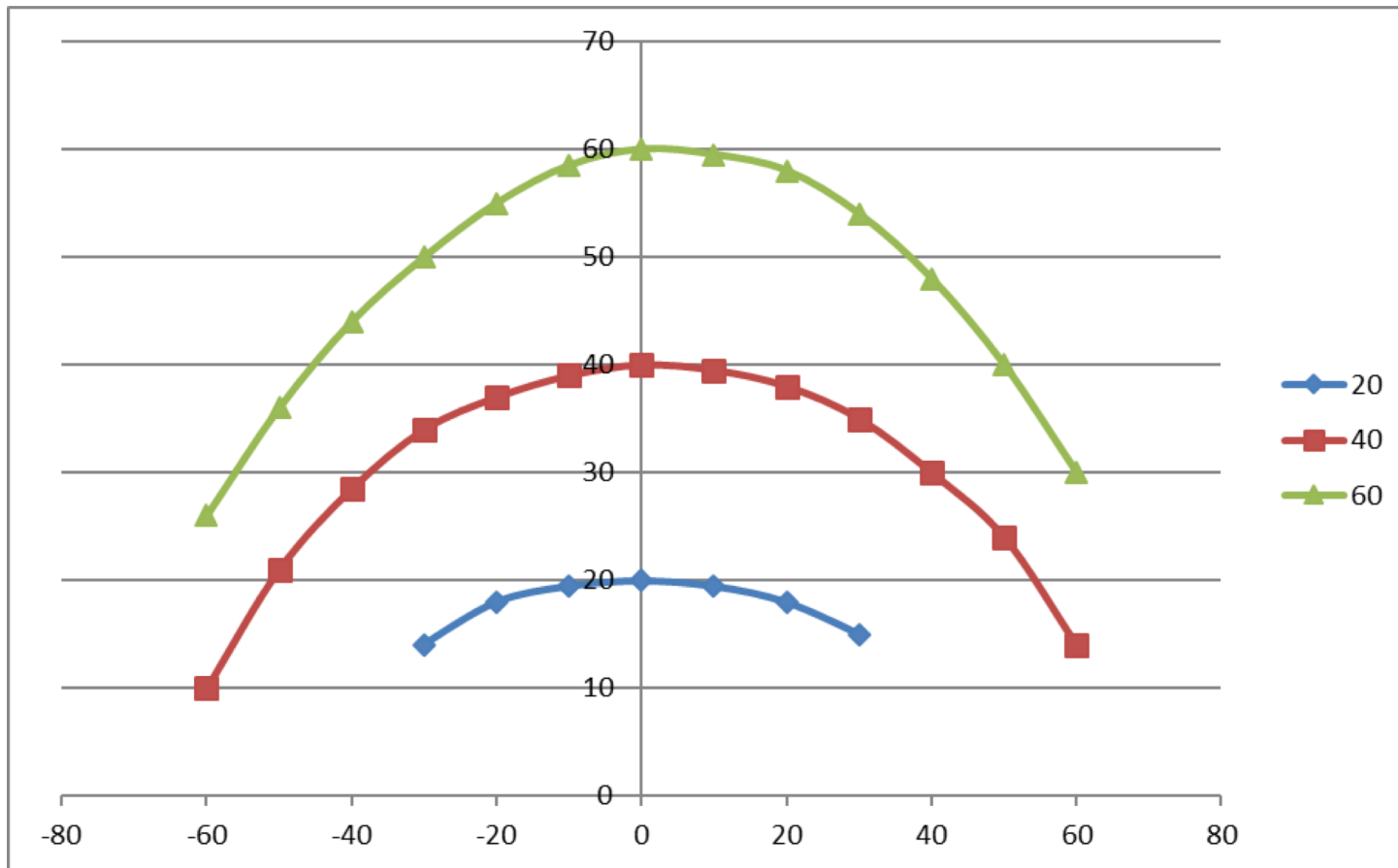


- Downhill slopes require a greater correction than uphill for the same gradient due to gravitational effects on the arrow flight and rest
- Arrow speed has a small effect on the variation required
- Body alignment must be maintained and has a significant impact
 - Downhill shots generally shoot Right (RH Archer)
 - Uphill shots generally land to the left
 - Unit aiming is important, but difficult to establish with angles over 20 degrees
 - Different stances are required to establish the best alignment on extreme angles
- Compound flexible arrow rests can influence the variation



DEALING WITH SLOPES

- Compensation has to be made by
 - Aiming off
 - Adjusting Sight marks
- Table below illustrates the variations required by slope angle



DEALING WITH SLOPES

- Maintaining body posture can be a challenge



Variations in up hill and down hill shots tends to create misalignment of the shoulders; primarily because it is easier to drop and raise bow arm than adjust shoulder angles. This results in difficulties with aiming and on Barebow and Recurve impacts draw length.



Severe angles may require a change in stance to allow bow limbs to pass between legs.

DEALING WITH SLOPES – CROSS SLOPES

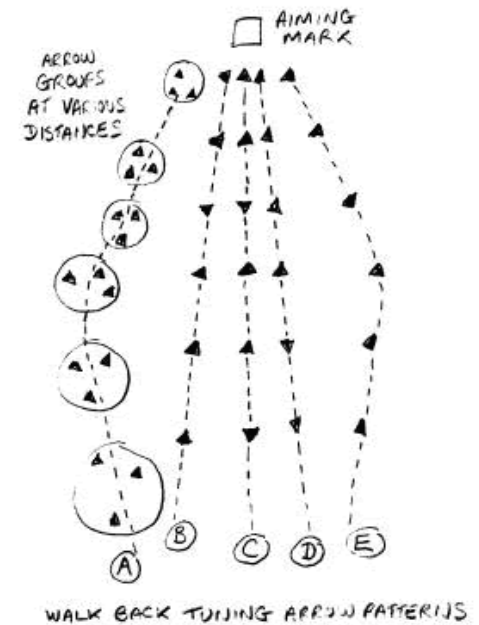
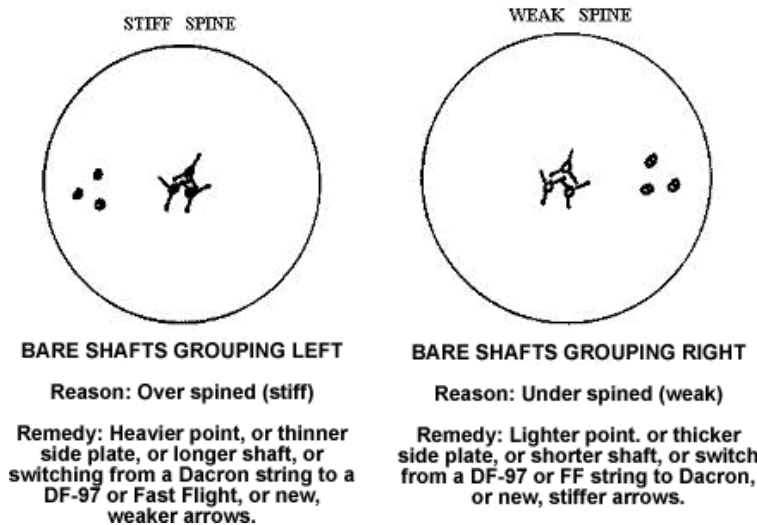
- Cross slopes create problems with body lean away from the slope
- This body lean causes the arrows to drift down the slope
- Correction is essential to centralise the shot
 - Level the ground where possible
 - Aligning the bow does not fix the problem
 - Body alignment is essential
 - Easier with Compound
 - Use Trees and objects in the distance
 - Over correction is better than too little





EQUIPMENT AND TUNING

- Best available equipment should be used
- Arrow matching is important
- Tuning is essential
 - Centre-shot required between 5m and 60m
 - Porpoising should be avoided to improve sight gap consistency
 - Lighter arrows create closer sight gaps and minimise distance judgement errors
 - Heavier arrows stabilise more quickly and create better centreshot at short distances
 - Barebow setup of Tiller and Nocking point is a compromise (27m)
 - Barebow left to right drift can be minimised by detuning



SPARES, PROTECTION AND REFRESHMENTS

- Everything needs to be carried by the Archer
 - Spares, Nocks, Arrows, String, Stringer, Glue, Fletchings, Gauges, Hex wrenches, Knife, Tape, Hot melt, Lighter
- Protection is essential
 - Waterproofs, Sun screen, Hat, Warm clothing, Insect repellent,
- Refreshments are often available, but usually at one or 2 locations only, therefore
 - Water & more Water, Snacks, Food, Bananas

FIELD ARCHERY – A SUMMARY

Field archery is an aspect of our sport that is practised by about 8000 archers across the UK, however it is often little understood and involves different bow styles, different methods of shooting and requires several distinct techniques that are little considered when shooting Target

As can be seen from the attached photo, some incredible scenery is often experienced when shooting Field archery and adds to the pleasure of the event.

and finally - as Brady Ellison has stated in the past, he would love to see this introduced into the Olympics

-- I Doubt it ever will be --

