

# THE BOWS OF DOUG PARRY – A REVIEW

by  
*Dennis La Varenne*



*Doug Parry in his workshop.*

Doug Parry is one of the finest makers of mediaeval English longbows or ELBs to use its common acronym, that I have ever known. I have had a few from renowned British makers which could only be said to be very average to poor in performance if not their build quality.

Generally those from British makers cannot be faulted in terms of both build quality and final finishing. However it is almost as if those two very important aspects of bowery sacrifice bow performance. If Philologus' question to Toxophilus at the start of Book II of Roger Ascham's 'Toxophilus' -

*"Philologus: What is the chief point in shooting that every man laboreth to come to?  
Toxophilus: To hit the mark."*<sup>1</sup>

If Ascham's devastatingly concise reply is to be taken seriously, then one is left wondering about the point which is no less relevant today than in 1545 by sacrificing performance for 'style' or prettiness. And some of them are astonishingly beautiful bows.

I follow a blog from a British archery site entitled 'Archer's Review UK'<sup>2</sup> which reviews these icons of British culture made by local makers. The bows are usually of modest draw weight, but the arrow speeds seem to me to be remarkably slow. From a 28 inch draw length, a velocity of 130 - 140 fps with

---

<sup>1</sup> **TOXOPHILUS 1545**, Ascham, Roger, Simon Archery Foundation, Manchester University, 1987. ISBN 0 9503199 0 9.

<sup>2</sup> <http://www.archers-review.com/bow-reviews/heritage-english-longbow-course>



*light for draw weight* arrows is achieved, something which I find difficult to believe. It just seems all wrong to me. But this critique is about Doug's bows, not British made bows.



*Some 50 of the 100 bow blanks which have to be delivered by Christmas 2016.*

We all know that ELBs were never designed for speed, so much so as to use the inertia of those long and rather heavy limbs to store energy sufficient to cast a very, very heavy arrow far enough and fast enough to penetrate the plate armour of the mediaeval period.

Since I first saw his bows on eBay, Doug always publishes good quality pictures of his bows unbraced, braced and partially drawn to 22 inches to show the bow's tiller. I was compelled to want one of them once I realized how very good his tillering was.

I now have several of them and nothing has declined in production values from the first to the most recently obtained. If anything, since he has introduced a full length reflex of about 2 inches into his gluing form, performance has improved a lot.

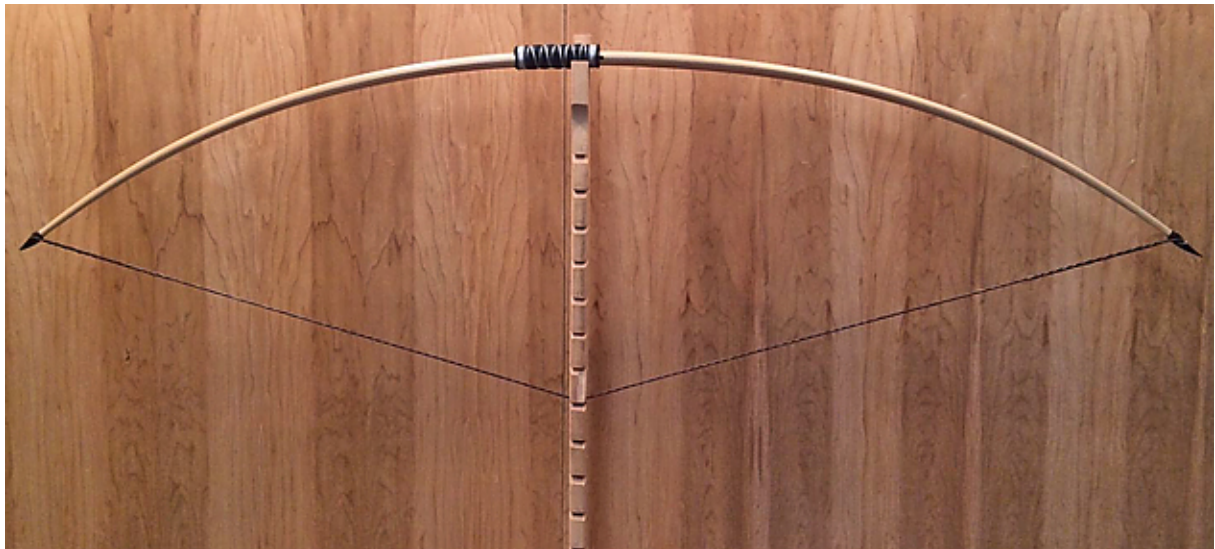
All of his bows are long, and I mean long. Most are 74 inches, 76 inches and sometimes 80 inches for the real whoppers like my 74 incher which draws 130lbs at 32 inches and a modest 115lb at 28 inches. I fear that in my old age I will not grow into it, but those are the sad truths of life. But what a bow to behold!!! I can barely get my fingers to touch tips when gripping it reminding me of that line from Chaucer's 'The Caunterbury (*sic*) Tales' and the Knight's Yeoman who was a Forrester –

*"A Yeman hadde he and servauntz namo  
At that tyme, for him liste ride so,  
And he was clad in cote and hood of grene.*

*A sheef of pecok arwes, bright and kene,  
Under his belt he baar full thriftily,  
(Wel koude he dresse his takel yemanly  
His arwes drouped noght with fetheres lowe.)  
And in his hand he bare a mighty bowe  
... a forster was h,e soothly, as I gesse."*

We set much store these days on having ELBs which have a circular bend. However, in any real world bow, this is almost impossible to achieve without piking the tips so fine that the last several inches would fine down to needles and break off.

Real world bows will have a decreasing amount of curvature toward the bow tips – a basic fact established back in the 1920s and 1930s by those amazing American archer-physicists/engineers, Paul Klopsteg, Clarence N. Hickman and Forrest Nagler, inhabitants of traditional archery's Dreamtime these days.



*Bow drawn to 22 inches on the tiller.*

Doug's are so made that at full draw on a tiller the eye is easily tricked into thinking that one is viewing a genuine circle of bend, but they do not follow the curve of a protractor held at arm's length against the full drawn bow. But it isn't by much. The use of the words '*round compass*' in reference to the shape of a drawn bow is a misuse of the Tudor term which refers to a curved shape rather than a protractor shape. Ascham uses exactly the same word to describe the trajectory of the arrow in flight later in Book II.

This is where Doug has taken notice of other's experience and found that thinning down the bow tips quite a lot makes the bow look 'right' but also probably adds to the speed of his bows. I say probably because I have not heard from the man himself that that is what he actually intended and I have not compared early bows in my possession with his later reflexed bows.

His bows also have the 'right' kind of limb action for an ELB. At early draw, the outer limbs peel away from their braced position from the tips downwards to mid limb. At this stage, the inner limb does not move noticeable until well after half draw when it too begins to bend in the manner of a leaf spring where the load at highest stress causes the shortest leaf to take up the bending load and beginning to move<sup>3</sup>. This action is the best description of that which Ascham intends in his description in Toxophilus.

This is not (including many of my efforts) the norm but should be. Most ELB limbs, even on lightweight bows, have Ascham's 'staffish' or thick ended in another section describing the making of the bows, causing the middle of the bow to begin bending from the start with little or no increase in the curvature of the outer limb. Most bowyers leave their tips far too thick to bend effectively, commonly still being as thick as half an inch where the horns fit. That thickness is suitable for bows of 80lbs and greater, but not for lighter weights.

My bows from Doug have tips at the horn joint which are barely 3/8" wide and not as deep. They are very fine indeed, but entirely proportional to the body of the bow without being bulbous and not what Ascham advises to avoid leaving the ends as '*staffish*' or too thick and stiff.

---

<sup>3</sup> Ascham, R., Toxophilus, 1545, Simon Archery Foundation 1985, pp. 109 -





*Lower and upper horns characteristic of Doug's bows. Upper horn has a bracingnock.*

My bows are of modest draw weight as well, none exceeding 45lbs at 28 inches, of which draw length I take 26 inches.

Despite their common 74 inches n-n length coupled with my short draw, these bows still shoot surprisingly quickly with arrows in the class of 10gn per 1lb of draw weight.

To get an idea of how quickly Doug's bows shoot, I relate to the flight trajectory of the arrow when its tip is held on a specific point on my target surface and compare the fall or climb of the arrow from each of 15m 20m, 25m, 30m and 35m.

My arrows are carefully weighed to ensure that I compare like with like when comparing the relative velocity of a heavier and lighter bows. So far, I do not have a bow from Doug which does not strike higher than the aim point at 30m (32yd) using per 1lb of draw weight (making sure to equalize the measuring units). I find I need to hold almost on the ground in order not to send an arrow so high that it embeds into the shed wall behind. To assist with deliberate aiming, I even have some of the old 1930s and 1940s bowsights that I have collected over the past few years<sup>4</sup>

With a maintained shooting form, standardized draw-weight arrows and distances, I can compare bow with bow and obtain an arrow speed per 1lb of draw weight or even 10lb per pound which allows me to get a pretty good idea of the bow's efficiency. Since my recent illness over 9 weeks of hospitalization, I have not had either time or strength to do this meticulous testing.

So, at this stage, I have not put my bows though a chronograph which is the only real guide to a fair comparison. No other factor is relevant to bow efficiency. If it is efficient, it will throw a specific arrow at a specific speed from a specific draw length and draw weight. If not, it will throw that same arrow at a lower speed. I have relied on measuring the fall of the arrow at set distances.

Presently, I cannot draw even a 30lb bow past 8 to 10 inches. however, when I am well again after a protracted stay in Hospital, I will dust off my old Chrony and measure arrow velocities because in relying on arrow fall, there can be quite a difference in velocity until it shows the effects of gravity at archery distances.

Just the same. arrow fall is still a pretty good guide to what is going on for the average archer. It does not establish arrow velocity but does show relative velocity.

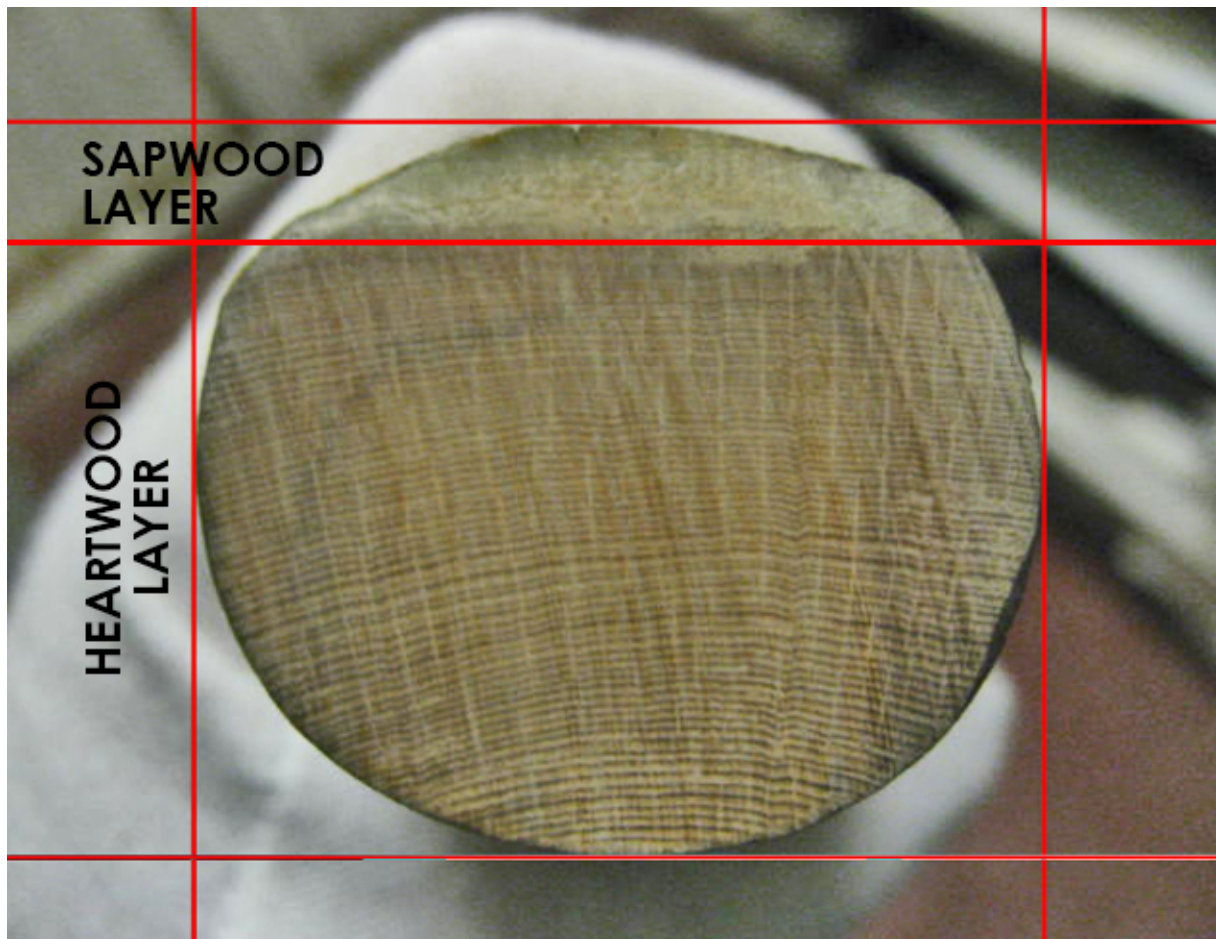
The arrows I have been using are those I have used for my article published as a PDF on <http://www.ozbow.net/> the Australian Traditional Archery forum. These had the advantage of varying the total mass of each arrow as an aid to estimating efficiency of each bow, ie. for each 1lb of arrow mass, what is the greatest velocity that can be obtained with any of Doug's bows per grain of arrow mass.

The heads are the excellent 'Top Hat' screw-on heads which John McDonald on Ozbow brings in from the US and of which I still have both 60 and 100 grainers. There was a surprise with these two head masses in that I had to back off to my backyard 30m (32 yards) range before I could get any kind of measurable average difference in the fall of each head mass – only a matter of close to 2 inches which is quite remarkable.

The above are all the technical details of my testing but I need to get back to the bows, their build and finish.

---

<sup>4</sup> Some of these sights have a refractor lense on one cross-arm of the sight which show a picture higher than what is viewed through the lens to allow compensation for long range obviating the need to hold over the butt at distances greater than 60 yards. There is always a plain non-refractor lens on the same horizontal arm which can be used for the shorter distances.



*Characteristic cross-section of an original Mary Rose bow which is clearly NOT of D-section but rather ovoid. Note also the shaping of the sapwood layer which indicates that there would have to be partially decrowned growth rings along the length of the back.*

Doug builds predominantly laminated bows, a kind which was discussed in Horace Ford's book *'Archery, The Theory and Practice of'*<sup>5</sup> as having been done as early as the mid-late 1500s by the Manchester bowyer by the name of Kensal, "as a child of necessity" when the supply of Yew had mostly dried up, but they could be every bit as good as good Yew from European Yew trees. Note that this period of English history was during the reign of Henry VIII when came the bows from the Mary Rose. So, those Yew bows aboard must have been very expensive items indeed.

The majority of his bows comprise two wood species for back lamination and belly lamination. I have backed bows from him of second growth Hickory backed with the same, Hickory backed White Oak, Hickory backed Red Oak, Hickory back Jatoba and a couple of tri-lam builds of Hickory backed, purple heart cored and any of the above bellywoods.

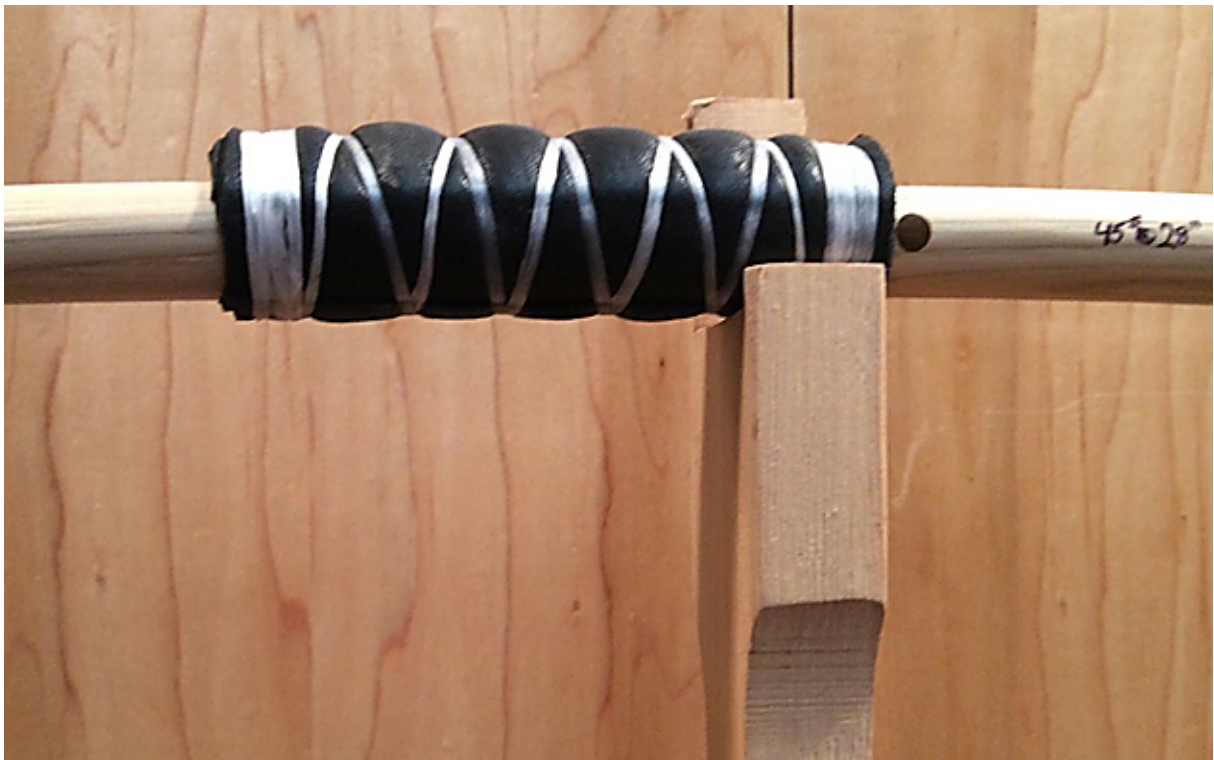
I also have a couple of second growth self-hickory bows. All of his bows are fitted with genuine horn from South East Asian sources.

There is usually an inlaid hardwood or horn strike-plate with the option of a wrapped deer skin grip area bound on criss-cross fashion with a deer hide thong. This handle wrapping appears a bit bulky to my eye, but there is no denying the very soft and cushioned feel of the stuff.

My own preference is for the original bare-bones bow lacking any adornment other than the functional horns of which Doug reduces to long elegant points. I have played around with side horn styling which works quite well, but Doug meets with some considerable resistance from customers who clearly don't trust the string not to come off the bows. They don't. But Victorian style horns are the flavour of the present time and that is what he makes.

He has also changed the cross sectional profile of his ELBs too. Originally he made them to the well known Victorian D-section profile before later changing slightly to the profile actually displayed by the Mary Rose (MR) bows of being a flattened ovoid shape wider than thick (but not by much) thus retaining a bow which has the original limb stacking of around 80% of bow width.

<sup>5</sup> **ARCHERY, The Theory and Practice of**, Ford, Horace, revised and rewritten by Butt, W., MA, Longmans, Green & Co. London 1887, pp 11 – 16..



*Optional deer skin wrapped-handle detail.*

That stack is a far better distribution of wood on either side of the neutral axis of the bow to spread compression and tension forces more evenly between them. However, intrinsic to the design, no ELB will ever be free of set with use because the area of the belly withstanding compression is always less than that of the back unless the bow is made from a deep rectangle section and the other fact that the further away is the neutral plane of the bow from either back or belly surface, the greater the bending load upon those surfaces.

None of which means of course that an ELB will perform badly. It is just that such loading places limits on what the wood will withstand before taking a set which can result in reduced cast over time.

To further obviate any tendency for his ELBs to take a set, Doug has made himself a gluing form which has approximately 2 inches of full length reflex in it. One would consider that that amount of reflex would worsen already marginal bending loads on the wood he uses, but I have a fair suspicion that he has been pretty judicious in his wood selection of

Second growth is the preferred wood from hardwood forests in the US because of the fact that growth in old wood forests which has been interrupted, destroyed by fire or by clearing allows the subsequent growth to have much wider and denser late or summer growth compared to the early or spring growth wood..

I prefer hickory as the backing for my bows because it has the appearance of a faux sap-wood which can bring a very nice contrast to a belly of Jatoba which is a very coppery colour not unlike good Yew or middle-aged Osage. Doug favours Bamboo as his 'old reliable' backing which never lets him down.

Second growth hardwood is not too hard to discern because of its characteristic very wide bands of late or summer growth which are much denser and harder than any kind of early growth wood greatly adding to its mass and greater impact resistance.

But, returning to Doug's bows and their apparent use of such wood, the normal maths of ELB bow design would dictate that any ELB which has a minimum of belly surface relative to its width would further compress and develop a set much earlier than a straight laid bow. It doesn't seem to happen with Doug's bows.

After the glue-up and drying, the belly is held in tension and the back is held in compression – at least for the initial bend of 2 inches reflex which means that the first part of its bending movement causes it to reverse those loads as it passes the neutral axis plane where the load becomes zero but having moved to that position, energy is stored in the limbs just the same. It is a clever use of the theory of a reflexed bowery.

My guess is that without realizing it, he takes his bows barely into the early stage of the elastic limit of the woods he uses which number hovers around 2/3 of the Modulus of Rupture of the specie in use. I have no way of demonstrating this of course and it seems that it does not consciously figure at all in Doug's bowery.



However, I cannot work out how amazingly straight his bows remain after continuous shooting, barely taking less than 1 inch of set or 1.5 inches of set after shooting which very quickly straightens out after rest. That represents a set of only 1.3% of the bow's length.

Some of his bows on his eBay page at present show bows with a very modest amount of set, but these tend to be the selfbows rather than the laminated bows. He makes laminated bows from up to 5 laminations which he calls his 'quint' bows from the Latin word for the adjective for fifth or 'QVINTVS' as the Romans spelled the word. The Latin letter 'V' was always pronounced as like the 'oo' in book.

Having established that Doug's bows are being perhaps underworked with a limb cross-sectional profile which is not conducive to maintaining straightness, it remains something of a quandary as to what is benefitting his bows to the degree that it so clearly does and my suggestion is exactly the same one our European ancestors came up with several thousand years ago and that was to increase the bow's length.

Making that simple allowance for the ordinarily high bending loads on bows of this cross section permits them to work quite well and at very long draw lengths without compromising their structural integrity. The length of the draw is directly proportional/relative to the bending load on the limb surface.

So lengthening them has had a similar protective benefit to bows made after the ELB fashion by increasing both the load bearing surface areas of back and belly longitudinally. If there is another reason why good ELBs tend to take a low set if at all, then I cannot think of one.

Longbows were not longbows just for their names-sake or some silly notion of traditional style. They were serious battle weapons and were purpose built and treated as seriously.

Doug's bows have carried on in that vein for the most part other than having to allow for buyer preference.

Writing as Toxophilus in his eponymous book, Ascham's advice to Philologus about the making of bows was to -

*"trust them to a good and cunning craftsman"*

for their final tillering and shaping. The word cunning as the Tudors used it is derived from a much older English word for 'to know' and so their use referred to a workman who was 'in the know' or knowledgeable in his speciality.

Other aspect of his build quality can be seen in his thin glue lines on well sanded surfaces which are not at all lumpy or have corrugations along the bow's limbs from incorrect use of scraper blades.

In finishing this article, I must comment on the use of a remarkable finish that Doug has been using of late which is called 'Osmo'. It is a German product which I am trying to obtain over here where it is supposed to be commercially available.

This remarkable finish has a very definite and 'soft' feel of a finely sanded finish. It is difficult to explain, but the finish just doesn't have the common cold and hard feel that so many finishes these days have. Osmo has a definite 'soft' feel about it without being delicate. It is easily touched up in the instance of knocks, scrapes and bruising through normal use.

On the subject of pricing, Doug's bows are astonishingly reasonable, ranging from \$US159 for a 68 - 70 inch bow, \$US159.00 for a longer bi-lam bows and \$179.00 for a tri-lam bow. Postage to Australia is \$55.00. I cannot remember his charge for a 5-lam bow presently but his site may be found at -

[http://stores.ebay.com.au/archeybowman?\\_trksid=p2047675.l2563](http://stores.ebay.com.au/archeybowman?_trksid=p2047675.l2563)  
on Ebay, so have a look.