A previously unknown stone monument in Borrowdale, Cumbria.

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Overview

During a visit to the famous Borrowdale yews in 2003, it was noted that there was a scattering of stones buried in the deep bracken and among the yews varying between approximately one to four tonnes in mass which, while it seemed random when viewed from the ground, appeared to the first author to be deliberately gathered and placed glacial boulders.

A further visit in 2012 tended to confirm her impression that this was a lost stone monument, and subsequent investigations have further corroborated the findings, allowing her to illustrate geographical and astronomical alignments which correspond to findings at the nearby Castlerigg monument and other Neolithic monuments. She considers primary astronomical and geographical alignments, and relationships between the new monument and the names of local geographical features. Internal (secondary) alignments, relationship to the ancient yews and apparent symbology in the layout of the stones have been investigated and interpreted by the second author. Work by both authors has been done in searching old texts for references to the site.

The findings on the ground.

The stones investigated here, at O/S Sheet 90 Grid ref. 235125 look randomly scattered at first glance, and seem untouched by tool marks. They cover an area of approximately 3500m² and are situated on a south facing slope at an elevation of 150m above sea level. More stones exist outside the area studied which may also relate to the monument as alignment outliers and avenue



remnants, but investigation of these is precluded by resource limits.

Key to the assertion that the stones are deliberately placed is the finding that at least two appear wedged into place on the slope with large flat rocks. The stones are a local concentration with placement features evident in their layout on the ground and so were not left in situ by glacial deposition as their smoothed form suggests. Likewise they are unlikely to be the result of rock fall. On this slope such large

rounded objects would continue at speed once moving, and they would not stop before reaching the base of the incline. Conversely, if the rocks arrived naturally in the positions described below the circumstance is perhaps stranger than the idea that their layout is the result of deliberate placement.

Findings from expert assessment

We are fortunate that Dr Peter Wilson of Ulster University took time to visit this site and look at the stones from a geomorphological perspective. He reports that he can confirm that the boulders are all of the Borrowdale Volcanic Group and he believes they were transported to the site (or very close to it) by the last glacier to occupy the valley. He can't say exactly where they came from within the valley because the volcanic rocks are quite complex - a lot of variety is concealed by the term 'volcanic'.

Dr. Wilson goes on to say: "there are no crags directly above the site from which the boulders could have fallen, so rock fall has not played any part. There are crags high on the hillside to the north, but boulders falling from those crags would not have reached the site - they would have had a different trajectory.

Most of the boulders are quite well rounded, as befits boulders transported within and below glaciers. Rock fall boulders would be much more angular. A small number of the boulders do have angular facets but these stem from fracturing of the boulders. At least one boulder has been split (a long time ago) in two - the smaller piece (still quite a big chunk) lies alongside and, if it were possible to move them, the two faces would fit together perfectly. Another boulder seems to have shed some small slabs from one side, giving it a sharp angular face on that side."



Photograph: Dr. Peter Wilson 2013

The findings from satellite imagery

Figure 1 is based on a Google Earth image of the area, aligned with Grid North, and shows a census of all identifiable large stones on the Western half of the image. There may be more in this area which are obscured in one way or another. Stones in the Eastern area of the figure are few and not plotted because there is a mountain stream which has caused a large area of high energy flood damage and erosion on the eastern edge of canopy area A, B in Figure 1. Some large stones may have moved, or have been lost to soil erosion and gravity entirely. A few stones are obscured by the yew canopy.

Figure 1 Relative location of monument stones at Borrowdale as viewed from satellite image A,B,C,D – Ancient yews, canopy coverage. D lost in 1883CE, presumed coverage. E is a younger yew.



The satellite image can be found online on various internet satellite mapping engines by using the search term "Seathwaite", the nearest hamlet, and then panning a short distance to the West. The north-western edge of the river only is shown in Figure 1. From it, the slope rises to the North West in a rounded promontory upon which the pictured stones are located. The floor of the valley is flat and level.

Internal organisation of the stones (secondary)





Figure 2

Figure 2 is an accurate plan diagram of the stones representing approximate shape and size, generated by tracing directly from the computer screen while viewing the site on Google Earth at maximum magnification. The image shows the central complex of stones which are the main focus of the secondary "circle" analysis, i.e. the geometric relationships of the stones one to another their orientation and alignments to the compass generally.

Foreshortening of the image because of the satellite camera angle and any effect of the slope is not accounted for, but is likely to have minimal impact on the results because the trees in the image and their shadows show that the image was fortunately taken from approximately 90° overhead.

Figure 3

The presumed circle defined. The selection seems arbitrary at first, but is put in place by finding the common equidistant centre of the highest number of stones, and then tested by looking for expected alignments, in this case using the data from the nearby circle at Castlerigg (Farrah R.W.E. 2008). The first trial circle produced a result very close to the one pictured here. The primary alignments are discussed later, and consist of the relationship of the geometry of the circle to the landscape, and astronomical events and objects. After this notional circle was created (without any scale) it was scaled and tested for conformity to the megalithic yard first proposed by Alexander Thom (Thom A. 1955). The circle conforms to Alexander Thom's megalithic proportions, being exactly 19 megalithic yards or 15.8 metres in radius. The number 19 is significant because it is found again in this monument.

All ground layout figures vertically aligned with Google Earth North



Figure 4

The alignment investigation is positive, Southern alignments are found from the origin of the circle, somewhat analogous to those at Castlerigg. The sites are bound to vary as the horizon in Borrowdale is not broadly circular as at Castlerigg, but jagged and hilly. It is noted that two tangents of the circle emanate from the large Northern marker stone at an angle of 51°. This represents exactly (within the limits of the draughtsmanship) one seventh of a complete 360° circle. The northernmost marker's circle bisection line may represent the axial alignment of the circle with Polaris at the time of the circle building.

Alignments: SSMi is southern minor standstill moonrise, SSMa is southern major standstill moonrise,SSMa2 is southern major standstill moonset. WSS and WSS2 are winter solstice

sunrise and sunset respectively. The south alignment down Grain's Gill aligns with the high point of the sun in the sky.



Figure 5

The cross is superimposed onto the circle. Four stones align as a Calvary type cross with the two lines bisecting at exactly 90°, the North-South line passing precisely through the origin of the circle.

The proportions of the cross are internally resonant, See figure 7 for the detail of Golden Section proportions.

There are still a large number of "unused" stones; however some readers will have noticed by process of Gestalt that they form a serpentine shape that begins at the group of 3 stones in the North of the circle, travels outside the circle in a loop, and then passes across the circle intersecting the origin.



Figure 6

This formation is unavoidably serpentine, passing into and out of the circle. The stone at the South Eastern point of entry aligns with the centre of the circle and the stone at the North Western point of exit. A similar alignment holds for the North Western reentry point.

The small North Western loop forms an out of circle "sanctuary" which opposes the site of the lost yew the other side of the circle and the serpent's head is separated from the body by the upper section of the cross.

The vast majority of the visible stones are "used up" by the application of the three figures: cross, serpentine "avenue" and circle, three harmonious and credible structures which all depend on the origin of the circle.



Figure 7

The cross is complex and beautifully designed.

Taking the inner (mutually closest) point on the edge of each stone as the delineation of the cross, a Golden Section ratio is found between distance a, the cross arm and distance b, the lower shaft of the cross. An identical relationship exists between c, the line from stones X1 to X3 (see appendix for stone index) and the upper section of the shaft, d.

The shaft of the cross is aligned at about -21° from grid North.



Figure 8

Considering the cross and the serpent as related, there are two stones that touch both. One of these is on the western arm of the cross; the other is on the shaft of the cross. From the intersection of the shaft and arms of the cross, the circle centre and this stone S4 (the neck of the serpent) are equidistant, and a circle could be drawn intersecting both, as well as the stone on the serpent and cross arm, to make a classic Celtic cross. The stone S4 seems significant in terms of the relationship between cross and serpent. When alignments are checked it becomes clear that equinox and solstice alignments are built in to the design with S4 as the origin, specifically equinox sunrise and set and winter solstice sunrise and set.

The winter solstice sunrise alignment is with stone S19, the point at which the serpent enters

the circle, further integrating the design of serpent, circle and cross. There are 19 serpent stones within the circle and the north western "sanctuary" loop. Given the apparent relationship between this monument and the sun it is interesting that there are likewise 19 (18.6) solar years in a lunar cycle, and the radius of the circle is 19 megalithic yards.



Figure 9

A further fascinating alignment runs from O1, through S4 and three other stones, the notional line running up Grains Gill and intersecting with the highest point of Allan's Crag, visible as the summit above that valley. The alignment is skewed by -2.5 degrees from due south apparently in order to achieve this.

The proportions between the distances are remarkable; distances A and A1 are equal. Distance B is twice A or A1. Distance C is three times A. A complex numerological analysis yields remarkable results, here it suffices to point out that if distance A=1 then A+A1=2, A+B=3, A+C=4, C+B=5, A+B+C=6, the total length is 7. Emanating from stone O1 are two circle tangents which represent 1 seventh of a complete circle. There are two more alignments of this sort within the monument, and both also point to major landscape water features, similar because they show even gaps between the stones, or multiples of even gaps, and (referring to the sequence and size of gaps) they can be represented like this:

1:1	1:1 1:2:1	
Sour Milk Gill water fall	Styhead Tarn	Grains Gill
3 stones	4 stones	5 stones

Recalling mathematical number progressions, the totals of the distance units in each alignment present us with a fragment of one of the most well-known progressions: 1, 2, 4, 7, 11, etc. now popularized as "The Lazy Caterer's Sequence" n(n+1)/2 + 1; or maximal number of pieces formed when slicing a pancake with n cuts (*On-Line Encyclopaedia of Integer Sequences*).



Figure 10

The circle radius is in an exact 1:4 ratio with the Grain's Gill alignment between stones O1 and S29 (half of the section, 1 circle diameter, is shown in red on Figure 10).

A further interesting circumstance is that the centre of the line O1 toS29 is only a metre or so from the centre of the cross. This point would represent the rotational centre of the Pole Star progression (precession of the equinoxes). The layout of the monument therefore seems to suggest that its builders were aware of the progression of the Pole Stars, and that they had a firm understanding of this large but slow effect centred on the rotational centre in Draco.



Figure 11 (from earthsky.org)

The rotational centre in Draco. Note also the presence of Ursa Minor, with Polaris near +2000 at the top of the circle in the diagram.

Having looked at both Draco in figure 11 and the Serpent in placed rocks as part of the monument, the similarity becomes clear. It looks very much as though the Serpent is meant to represent the constellation Draco. However, when a close examination is made, it becomes clear that the constellation is a mirror image on the ground.

Stones

In Figure 12 Draco has been mirror imaged for comparison with the formation of stones.

The Precession

Draco mirror image (scale)

Due to the precession of the equinoxes, the star used as the North Star changes in a 26,000 year cycle in an anti-clockwise direction (earthsky.org). In 2000BC, Thuban (Alpha Draconis) was North Star, and corresponds on the transposed Draco as stone S19 – aligning with Southern minor standstill moonrise – indicating that Thuban might have been an important star in their culture and that the oral tradition might have gone back as far in time as when Thuban was the North Star.

Kochab- stone C2 (major standstill moonset) was another previous North Star. Stone S29 appears to represent Polaris in the constellation Ursa Minor as it is in the sky in relation to Draco in its correct [non-transposed] position. The stone is due south of stone O1, 2 deg. 30 min. west of grid North. From stone O1 south to Grains Gill is 6 deg. 30 min. East of grid North, through the middle of the circle to stone O5. The layout of the 5 stone alignment from O1 to stone S29 follows the sequence of the first four numbers in a Fibonacci progression.

Other stone groups can be seen to reflect constellations, particularly Ursa Minor (S29= Polaris, leading to S21, O4, C3, C2, C1, C7). Once noticed, the similarity in layout is striking, and "uses up" certain stones with no other apparent function. Draco, as mentioned is the Serpent (see figure), but a mirror image of what is seen in the sky. Reasons for why this may have been done are detailed below.

If we are correct, and stones O1 and S29 both represent Polaris, on an axis that passes through the circle with a Fibonacci sequence represented in its layout, and aligned 2.5° from Grid North on the ground, then Polaris must have been the Pole Star at the time of circle building, and very likely at 2.5° from True North.

Polaris has been in position to be used as North Star since 295CE (NASA). This would indicate that the Borrowdale Monument could have been constructed at or after the time of the Roman

withdrawal from Britain and a possible Brythonic resurgence from 383CE until the coming of the Christian Saints to the North.

The yews would then have been planted as an integral part of the circle and be contemporary with it, the detail of the yew aging at c1,500 years being examined below.

A further circumstance suggests that the above analysis may be correct. The precession of the Pole Star mentioned above centres on a particular point in the sky, right in the first curve of Draco. This is a good moment to remember that The "Fibonacci" axis line, Polaris O1 to Polaris S29, passes precisely through this point, the point perfectly bisecting the line itself. The length of this "Fibonacci" line is exactly two circle diameters, or 76 megalithic yards.

Further, as mentioned above, the intersection of the shaft and arms of the cross is at or very near this point (error margin c 80cm on the ground)

The wider site



Figure 13

Returning to figure 1, more stones are visible outside the central circle area. They can be absorbed by one of the three structures already described. A serpent's tail is formed, perhaps a long approach avenue with spacing of the stones in largely equal degree using the northernmost stone as an origin.

A great deal remains to be said, and no doubt found; indications of geometric numerology have been noted during this investigation revolving around the numbers 7 and 19

particularly. In comparison with other local monuments the Borrowdale stones are overtly rich in geometry and symbology; a piece de resistance which clearly has the sacred as well as the practical functions commonly ascribed to such creations. A further key finding is discussed in "The relationship between the stones and the yews" below.

"I will not praise contrary to the Bards of the Brython.

Wonderfully liberal of the knowledge of astrologers"

Book of Taliesin XXXVIII C580CE

Symbolism



Illustration 1

Symbolically this monument is very interesting, and a brief look at some possible mythological and religious references follows, bearing in mind that proper investigation of the Cross- World Tree connection briefly examined below would represent a major study in comparative theology on its own. It is known to history that the region was Brythonic in culture at the time of the proposed yew tree plantings and before (*Books LCC, 2010*) and a useful reference summarising relevant Druidic

(Brythonic) practice is found in Manly P. Hall's The Secret Teachings of all Ages (Hall M.P. 1928)

"Their temples wherein the sacred fire was preserved were generally situate on eminences and in dense groves of oak, and assumed various forms--circular, because a circle was the emblem of the universe; oval, in allusion to the mundane egg, from which issued, according to the traditions of many nations, the universe, or, according to others, our first parents; serpentine, because a serpent was the symbol of Hu, the Druidic Osiris; cruciform, because a cross is an emblem of regeneration "...

"Both the cross and the serpent were sacred to the Druids, who made the former by cutting off all the branches of an oak tree and fastening one of them to the main trunk in the form of the letter T. This oaken cross became symbolic of their superior Deity."

This symbol, extracted from the line data above, shows a serpent entwined with a cross around and within a circle; in Druidic thought this might have been a serpent- the god Hu in a symbolic holy tree, or taking into account the meaning of the circle and the fact that Hu represents the sun, the universal tree of God, or Tree of Life.

It is also a very odd coincidence that the yew is famously symbolic of regeneration in the myths of numerous cultures (*Hageneder F. 2007*) and that ancient yews grow on the site and in one case within the (notional) circle itself. Hageneder also gives some evidence that the yew was associated with the Tree of Life in ancient religion.

It is also the case that the lost yew aligned with the centre of the circle so that the winter solstice sun would appear to rise (and be "reborn") from among its top branches when viewed from the centre of the circle and from the loop formed where the serpent leaves and re-enters the circle. The known mythology of the historically resident culture and the physical features that still exist on the site seem to correspond in a very elegant way.

Geological and Astronomical Alignments (primary)



Having considered the internal layout and organisation of the stones, it is now possible to turn our attention to the alignment of the monument with various geographical features and astronomical events, the secondary structure having given an indication of the whereabouts of likely viewing points, as well as some solar alignments related to the cross.

Other prehistoric monuments have been shown to relate to the "Standstill Moon" phenomenon, and Castlerigg monument has been chosen for comparison because it is nearest and so any alignments will most nearly match, the latitude and longitude from which they are viewed affects the orientation of astronomical events. The Borrowdale site does exhibit such alignments, both with stone alignments and circle to landscape feature alignments. Castlerigg monument shows certain alignments to lunar events, and it is worth explaining the less well known "standstill moon" phenomenon first described by Alexander Thom in his 1971 work "Megalithic Lunar Observatories" (*Thom, A. 1971*).

Major standstill moon

During the 18.6 year lunar cycle, there will be one Major Standstill Moon. This is a period of two years, the last one having been 2005/2007 and the next 2023/2025, when at midsummer the northernmost moonrise will be more northerly than that of the most northern sunrise, and moonset will be more northerly than sunset, the moon will therefore travel across the sky above the path of the sun. Conversely, the moon will rise more southerly than the most southerly sunrise at midwinter Solstice, and travel across the sky below the path of the midwinter sun.

Moonrise and moonset change from south to north positions over a two week period.

In addition to this, at each extreme, north and south, the moonrise and moonset will only change by approximately 1.5 degrees for several days, a change not noticeable to the naked eye. This is the reason for the description "standstill moon"; however, if the moonrise and moonset are observed using an instrument, such as a specific stone aligned with a geographical landmark in the distance, this small change would be noticeable, and the northernmost or southernmost movements of the moon noted.

Minor Standstill moon

9.3 years later, a similar phenomenon occurs, when the moon again appears to rise and set in the same place for several days, and again appears to "standstill" to the naked eye. This could again be observed if a stone were to be lined up accurately with a geographical landmark in the distance.

During a minor standstill moon year, the moon will rise and set inside the northernmost and southernmost sunrise and sunset of the midsummer and midwinter Solstices.

In the intervening years, the "inter years" the moonrise and moonsets will change by approximately three degrees each moonrise, easily noticeable to a trained naked eye familiar with the local landscape.





Table 1 Sample comparison: Stones aligned with standstill extreme northerly and southerly moon rises and sets- Borrowdale and Castlerigg monuments. Angle taken from grid North, viewed from the centre of the circle. Castlerigg data from Farrah (*Farrah R.W.E. 2008*).

Figure 4	Standstill Moon	Castlerigg	Borrowdale	Borrowdale	Geographical Alignment	
reference				Stone ref.	Borrowdale	
		Rise				
	Northern Major	34.9	no stone visible	yew canopy	Northern edge of Borrowdale valley	
	Northern Minor	58.2	no stone visible	yew canopy	Low centre of valley, church	
	Southern Minor	123.3	122	S19	Capel Crag	
SMR	Southern Major	146.6	148	S20	Glanamara trig point	
		Set				
	Southern Major	213	217	S22	Summit of Base Brown	
	Southern Minor	237	238	S27	Gap between Base Brown and Grey	
					Knotts	
	Northern Minor	301.9	303	S10	North edge of Grey Knotts crag	
	Northern Major	325	325	S6	Seatoller Fell	



Figure 10 Viewing positions

Observations: alignments of geological features with stones

The circle appears to have three distinct areas from which to view each phase of the lunar and solar cycles as shown in figure 10; A, the geometric centre, C, the "serpent's head", and B, the area of the "serpent's neck" outside the circle, and all measurable major lunar and solar calendar event sunrise and sunsets show alignments between geological features and stones on this site.

The midsummer Solstice sunrise rises over the yew crags on the northern side of the valley, and when viewed from "C" the "serpent's head" (See figure 10), is in-line with stone S2, (See Appendix) illuminating Great Gables at 899m high. In the same 24 hour period, the southernmost moonrise

for that month in a major standstill year, would have risen over Glanamara, marked by stone S18, close to stone S19, which marks the southernmost moonrise for all major standstill lunar years, the last one having been 2005/2007.

The highest/most northern moonrise for 2005/2007, when viewed from "A" the geometric centre of the circle, would have been a waxing moon, seven days before full, appearing over Longthwaite.

The southernmost moonrise for this major longstanding cycle, viewed from the "serpent's head" Coomb Head, in line with stone S19, eight days after the Autumn Equinox, when the sunrise would be see over Bessyboot due East, and over stone S2. There may be other stones within the yew trees, which are not visible from the overhead photograph. Ground survey is necessary.

The moon continues its apparently pendular swing from north to south and back again, until the end of the major standstill moon year, when on 23rd December 2007, the Winter Solstice for that year, the northernmost moonrise for the month of December in that moon cycle, coincided with a full moon. From the "Serpent's Head" the Winter Solstice sunrise would be over South Cragg/ Coomb Head, marked by stone S3, with the moonrise for the same 24hour period rising over Longthwaite and marked by stone S1.

Further calculations for other major and minor standstill years are needed to confirm these alignments.

Nine years later, a minor standstill moon cycle will occur, calculations are needed to check the alignments, but it would appear that the southernmost minor standstill moonrise would rise over Cam Crag, aligning, from the geometric centre of the circle, with S19, with the Midwinter Solstice sunrise over Coomb Door and aligning with stone C4. The Midwinter Solstice sunset would go down behind Great Gable, aligning with stone C1. The southernmost minor standstill moonset occurs down the valley between Kirk Fell and Great Gable, in the direction of Sour Milk Gill.

From "B" the area where the "Serpent's Neck" leaves the circle and re-enters, stones S11 and S7, on a line from the North Pole stone O1 to stone S28, the Winter Solstice sunrise would still have appeared over Coomb Door, Coomb Head and South Cragg, but also lines up with the stone between S19 and S20, the sun setting behind Grey Knotts, in line with the top of stone S11. The major standstill moonrise in the same 24 hour period would be over Glanamara, in line with stone S20, and set behind Great Gable, however, this southernmost major standstill moon would be lower than the sun at Midwinter, and might (viewing and photography are needed to confirm) skim the top of the southern, high landmass, and might disappear and form a halo behind the highest mountain in England, Scafell Pike, with the light shining down Grains Gill, and the valley between Great Gables and Kirk Fell, before setting in the west.

The circle is probably on the northern side of the valley because the valley floor would have flooded, and it is the gentler of the two slopes; its elevation gives alignments with the very high southern landmass. It is also directly aligned with Grains Gill, a straight valley due south of this position which could be significant.

The fact that the stones are boulders rather than the standing stones of the famous circles such as those at Castlerigg and Stonehenge suggests that the landscape is an integral part of this circle, and formed part of the calculations and ceremonies for which the circle may have been used.

In order to accurately calculate the 18.6 year lunar cycle, it is necessary to also mark the solar cycle as discussed above. This circle does both, marked by both stones on the ground which are aligned with unmoveable geographical features.

Speculation on the use of the relationship between the lunar cycles and human reproductive health

To ensure the survival of a strong and healthy tribe, it would be essential to have healthy women and children.

It can be shown from the findings of modern medical science, detailing the musculoskeletal maturity of the female body and the safest, healthiest time to carry a baby and give birth, and the time after which a woman is less likely to produce a healthy child, coincides with the 18.6 year lunar cycle.

It is the appearance of the epiphyseal plates, along with other indicators such as joint degeneration and tooth wear, that enable osteoarchiologists to determine the approximate age of a skeleton found on an archaeological dig.

The female skeleton stops growing, and most of the epiphyseal plates are fused by the age of 18-19 years, the small bones of the wrist and hand, are slightly later: but the most obvious exception are the sacrum and ilium, which fuse at about the age of 25 years.(*Palastanga, Field and Soames, 2002*)

In the 21st century, 25 is still regarded as Elderly Primagravia and by the age of 35, the danger of multiple births and chromosomal abnormalities increase.

18.6 years is one lunar cycle, if the position of the moonrise at the birth of a female child is marked, by someone who understands the lunar cycle, the time when it becomes safe for her to begin having children can be calculated. 18.6 years on, and she has reached 37 years, the age after which healthy children are less likely.

Maiden, mother, crone, barren (after menopause) are four phases of female reproductive health and a stone circle, such as that at Borrowdale, would enable the accurate measurement of these time spans. The same science applies today, but modern medicine pushes these boundaries to extremes, often to the detriment of child, mother and society.

The relationship between the stones and yews



Borrowdale yews (Foster B., engraving Evans E. 1850-69)

Wordsworth and other old references

William Wordsworth wrote about the yews on this site in his 1803 poem *Yew-Trees, (Knight W. 1896),* describing the individuals here as "The Fraternal Four" although the yews are actually female.

Certain points in his poem are of particular note: "Joined in one solemn and capacious grove" suggests that the canopy was flourishing, extensive and joined, but even more importantly the stones themselves are mentioned: "As in a natural temple scattered o'er/ With altars undisturbed of mossy stone,".

The engraving by E. Evans reproduced above is revealing, because it shows several details which seem to have been forgotten. To the left of the triple trunked yew is a faint representation of the fourth yew which was lost in the great storm of 1883 (*Lowe, J. 1896*). The fallen trunk still lies in situ; it was a very old yew tree with a considerable girth. The large tree to the far right of the image was not a yew, it is still found in later pictures of the grove that post-date the great storm. Furthermore its habit is clearly different from that of the yews. Some of the substantial stones that Wordsworth wrote about are pictured too.

Relevance and ages of the yews

Are the yews and the circle linked? Firstly, one must consider whether there are more such yews in the local landscape. If there are yews on the circle but nowhere else it is reasonable to suspect that they may be deliberately planted, and protected against grazing animals. An exhaustive survey both on the ground and using canopy recognition with satellite photography shows that no other wild growing yews currently exist here in the upper dale. An 1885 account by Harriett Martineau (*Martineau H. 1885*) tells of a huge yew in Borrowdale, larger than the individuals pictured above, which has since been lost.

Is it credible that the circle builders might have planted these yews? An age assessment of the trees is essential to throw light on the question, and this complex problem has been addressed in *The Borrowdale yews, Taxus baccata L.* which is a purely botanical description of the trees from a survey completed in 2012 (*Hindson T.R. 2012*).

The findings are that the trees, if planted as a group, certainly exceed 800 years in age. Further, in the opinion of the author they are probably somewhat in excess of 1,200 years old. In a separate preliminary work the Dendrologist Dr. A.K. Moir finds the oldest yew to be approximately 1,500 years old (*Moir A. 2004*). It is notable that he finds the oldest yew to be one of the smaller individuals. These figures suggest that the yews were indeed planted together, with a planting date range of 500CE plus or minus 200 years, bearing in mind that the methodology of the 2012 study yields conservative results, and Dr. Moir's work is likely to be broadly correct.

As the monument building tradition is thought to have ended about 900BCE, there is a substantial gap between the probable ages of the yews and the likely age of a monument of this sort. Such a gap can mean several things. Perhaps the yews are older than they appear and are calculated to be, and the monument is a very late one. It is certainly atypical. The circle might well be part of a late Brythonic revival. Perhaps the yews are seedlings or layers that grew under the canopy of contemporaries of the vast specimen mentioned by Martineau at the other end of the dale, which judging by the description might easily have been 2,000 years old or more when it fell, probably at the end of the 1700s. If the yews were seeded then why did they seed only here at the monument?

Possibly (and in the light of the evidence this seems quite likely) the yews were planted or replanted by the descendants of the Celts of this region who still remembered and used the site at the time of the monument creation; although it is also conceivable that the yews and perhaps the cross were added as a Celtic – Christian statement, which would be in line with the thesis that many of the oldest yews were planted by early Christian Saints - an idea put forward by Robert Bevan-Jones in *The Ancient Yew (Bevan-Jones R. 2002)*. In considering that idea one must also bear in mind the caveats that the cross is linked to the sun in pre-Christian thought and that the cross and serpent complex appears to be created as unit with specific solar alignments. However following Bevan-Jones' suggestion, a planting candidate for this region would be St Oswald. There is evidence of the edge of an old terrace under two of the yews, connecting them, which certainly suggests that these ancient trees were deliberately placed, and that the wall underneath them was built in the dark ages or before.

Whatever the truth, it can be no coincidence that these Taxus *baccata* L. specimens are unique in the landscape, and grow right on the circle. It is a fact that wild specimens of their magnitude are

vanishingly rare in the whole of the UK; I calculate the mean UK population density of yews like this to be in the order of 1 individual per 100 square miles (*Data: the Ancient Yew Group, gazetter*). We hold that their existence at the monument and likely age is potential physical evidence for the local survival and continuation of the Celtic religion, Druidism, well into the Anglo Saxon period known as the Heptarchy, and possibly beyond.

It seems that the yews date from before the annexation of Rheged about 730CE, at which time the kingdom is thought to have retained a strong British identity and Brythonic language and culture, notwithstanding the Roman occupation and suppression of Druidism. How strong this identity really was may well be evidenced by the yews and monument found together here at Borrowdale. Below we go on to consider possible references in the writings of Taliesin, a real historical Brythonic figure who was known to be in Reghed about 550-590 CE.



Findings from ancient Brythonic texts

The work would not be complete without a search of contemporary records, and this section looks at materials which are well researched ancient documents translated from the Welsh, some of the oldest British poems or writings of any sort that remain to us.

Considering the monument in terms of ancient Brythonic writings, particularly the work of Taliesin which is among the most firmly verified in the historical scholarly sense (W.F.Skene (1868) *The Four Ancient Books of Wales,* republished 2007, Forgotten Books), we find some extraordinary passages. The 6th century poem attributed to Taliesin: *The Battle of Godeu*, or popularly *The Battle of the Trees* contains a passage which has hitherto been inexplicable, and may very well relate to this monument, or another like it:

Lines 196-205

Honour was allotted to me By the Lord, and protection (was) where he was. If I come to where the boar was killed, He will compose, he will decompose, He will form languages. The strong handed gleamer, his name, With a gleam he rules his numbers. They would spread out in a flame, When I shall go on high. I have been a speckled snake on the hill,

There are very clear parallels between the monument described above and the lines written by Taliesin. The most obvious is the "speckled snake on the hill", which is easy to imagine as the serpent in Borrowdale picked out in rocks. If this was a Brythonic monument with embedded Druidic secrets, then it is certainly the sort of thing that Taliesin seems to allude to in his poems.

Having once allowed that this reference could be relevant, then the preceding lines need some consideration.

"The strong handed gleamer" in this context, following the reference to "The Lord" would appear to be a dual reference to Hu in his guise as the Druidic Osiris and as the constellation Draco, and the continuation "With a gleam he rules his numbers" an allusion to the numerical sequences and mathematical relationships described above. "They would spread out in flame when I shall go on high" suggests the fascinating possibility that the stones were meant to be seen or visualized from above, and that they might have been individually lit in honour of the sun, or the stars which they appear to represent, perhaps to be seen from Grains Gill where the pools and waterfalls are beautiful and are the kinds of features which might well have been seen as sacred.

The extraordinary lines "If I come to where the boar was killed, /He will compose, he will decompose" are astonishingly potent to the poetic mind set, so seemingly casual but fraught with meaning in a way which scholars of literature might recognise as a precursor and perhaps superior to a Shakespearean complexity even in this translated form. "He will form languages" speaks of the

oracular, in which understanding works through varied inspirations, each a world or paradigm of its own, and perhaps mirrors the seemingly multi -functional aspects of the monument.

Skene, although cautious and level-headed in his scholarship is eloquent on the subject of the content of the Book of Taliesin, and his text harmonises well with our idea that the lines above from The Battle of Godeu could refer to our Borrowdale site, so we shall quote his view at some length: (p.127)

"Where the real drift of the poem is not understood, it will of course have the aspect of meaningless verbiage, just as the ritual of a church, to one who does not know what it is intended to convey or to symbolise, appears mere mummery; but as soon as a clue is obtained to the real meaning of the poet, the allusions in the poem- however obscure they appear- become intelligible and consistent, and before the critic can justly urge this objection, he must be very sure that he has grasped the real meaning of the poet, as well as comprehend the true bearing and place in literature of the poems he is dealing with. That these poems are really intended to convey a definite meaning I do not doubt. They will be found to harmonise with the history and intellectual character of the place and period to which they belong, and the first work of the critic is to ascertain, on definite grounds, what that place and period really is."

The serpent appears to have a further place in the Brythonic religious mind set, contemporary Druids sometimes describe themselves as serpents, and the reference is to wisdom or cunning. An illustrative reference is found in Taliesin's *The Fold of the Bards*, although this particular poem is argued by some including Skene to be a 10th century or earlier "construct" rather than a 6th century "original".

Lines 9-12 I am a harmonious one; I am a clear singer. I am steel; I am a druid. I am an artificer; I am a scientific one. I am a serpent; I am love;

The worship of Hu is still clearly current on Mona (Anglesey) in the time of Taliesin, and it is quite reasonable to suppose that it was also current elsewhere in the Brythonic world. An example is found in *The Book of Taliesin*, XLV:

The poem opens:

Disturbed is the isle of the praise of Hu, the isle of the severe recompenser Mona of the good bowls, of active manliness. The Menai its door.

A final very remarkable passage from the works of Taliesin needs to be examined; it is found in the last five lines of *The Reconciliation of Llud the Less, The Book of Taliesin* LIV

Before the presence of Roman leader there is conflagration. The son of Gradd of fluent speech, retaliated, Cymry burning: war on slaves. I will consider, I will deliberate who caused them to go. The Brythonic energy arose.

It has already been mooted that the Borrowdale site may be physical evidence of a post Roman Brythonic revival, and Taliesin here attributes the withdrawal of Rome to the potency of the Brythonic energy. The final five lines of *The Reconciliation of Llud the Less* give credence to the idea of a revival, and although the Llud that Taliesin refers to is part of the Northern Welsh Peninsula it is not actually far across the sea to Cumbria, and the fact of Taliesin's frequent presence there shows that the culture is likely to have been the same, with frequent comings and goings between Kingdoms.

We know from *The Book of Taliesin* that Taliesin knew and praised the late 6th century King Urien of Reghed in numerous surviving poems, Reghed being the kingdom in which Borrowdale is found, and spent much time as Urien's Bardic courtier. So Taliesin was in the locality at (historically speaking) the time when the Borrowdale yews were likely to have been planted.

In Conclusion

Despite our best efforts it is impossible to come to a firm understanding of how these stones came to lie together in the remarkable associations described, although thanks to Dr. Peter Wilson we do know for certain that they have been in situ for a very long time, and are not rock fall; and that is very helpful evidence for investigations over the long haul.

From one point of view that hardly matters however, the presence and provenance of the ancient yews strongly suggests that even if the stones were not moved or rearranged by human agency, then their relative positions and their place in the landscape was noticed by the Brythonic people who lived in Borrowdale 1,500 years ago, and it is reasonable to believe that this was a notable site of reverence at that time. It may be that we have some historical evidence for what the stones and their site represent through *The Book of Taliesin*, it is certainly the case that all of the evidence that we have been able to amass holds together in a remarkably compelling way.

Marcello Truzzi, a founder of the Society for Scientific Exploration famously wrote "extraordinary claims require extraordinary proof". This claim, that a new form of British ancient monument which genuinely illustrates some of the sacred and mythological understanding of the megalithic builders can be held to be extraordinary, and the descriptive and analytical content of this document, while intuitively compelling, is not held to be a firm proof. Much work from varied fields of knowledge will be necessary to verify this find, and is in progress.

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Appendix 1

Index of stones noted to date: October 2012



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