# The Drusian Foot and Royal Cubit in the South Dorset Landscape
By Jonathan Harwood

For many years I have been studying the patterns created by the positions of churches in the South Dorset landscape. A full and updated report of this research can be found by visiting my website, www.dorsetgeometry.com. I now think that these patterns were created in the late Roman period by gnostic Christians and that one of these patterns represents the floorplan of the holy of holies of the Temple of Solomon. I have presented these ideas in an article published in the November 2017 edition of the Wessex Research Network Newsletter www.wessexresearchgroup.org/newsletters.html.

Figure 1
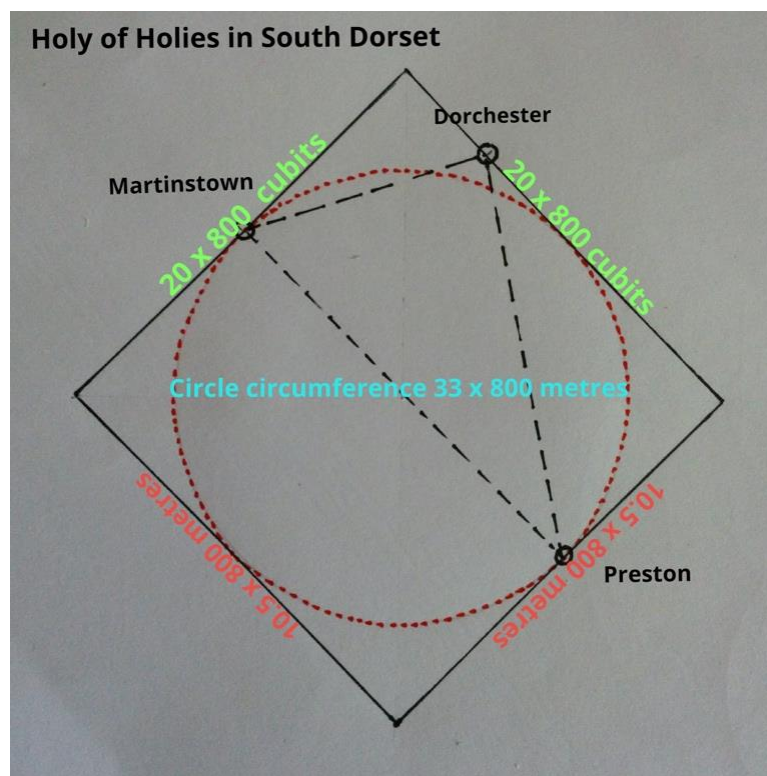
There are two reasons why I think the grid pattern shown on *figure 1* represents the holy of holies of the Temple of Solomon. Firstly, it can be shown to be an exact scale model at 1:800 of the Biblical floorplan which is stated to be 20 × 20 cubits. Dr Joseph Heinsch, in a paper entitled *Principles of Prehistoric Sacred Geography* (1937), adopted the widely held view that the cubit referred to in the biblical accounts was the royal Egyptian cubit of 0.525 metres. Each side of the holy of holies therefore also measured 10.5 metres (0.525 × 20 = 10.5), making the perimeter equal to 42 metres. According to his researches, 42 was a highly significant symbolic number. For example, ancient Egypt was divided into 42 provinces and 42 judges of the dead decided whether the departed souls were innocent of 42 sins. According to Clement of Alexandria (150 – c. 215), there were 42 books of the Egyptian sage Hermes Trismegistus. Solomon's temple is reputed to have been built on the site of Abraham's intended sacrifice of his son, Isaac. The perimeter of the South Dorset grid pattern measures 42 × 800 metres. The number 800, by gematria, signifies *Kyrios* (Lord), an epithet of Jehovah

in the Septuagint (Greek Old Testament) and Jesus in the New Testament. In Chapter 1 of the Gospel of Matthew Jesus's descent from Abraham is specified in 42 generations.

Secondly, the holy of holies can be shown to have been of crucial symbolic importance to gnostic Christians who followed the teachings of Valentinus (100 – c. 160 AD) and Marcus (dates unknown). It was the 'nuptial chamber' in which their central rite of the 'sacred marriage' took place. Marcosian Gnostics were known to be present in the region of Lyon in the 2nd – 4th Centuries AD. Close ties existed between Gaul and South Dorset at that period. There is also evidence of Gnosticism from mosaics found in Roman villas in Dorset. It is quite likely that some of the powerful landowners (drawn, no doubt, from the old Durotrigian tribal elite) in the region of Durnovaria (Dorchester) were practicing gnostic Christians. They may well have been Marcosians, combining Valentinian theology with the Pythagorean number symbolism and Greek gematria that has been encoded within the South Dorset landscape patterns. The interpretation of this gematria points to the conclusion that the group responsible for commissioning the patterns believed that the holy of holies had been transformed into the nuptial chamber of Jesus and his 'consort', Mary Magdalene who represented the 'fallen' Sophia.

This theory, however, rests heavily on Dr Heinsch's ideas about the measurements of the holy of holies. He believed that the modern French metre was the basic unit of measure used in prehistoric times to create a structured symbolic landscape that can still be detected today by analysing the positions of features such as old churches and mosques that invariably occupy older sacred sites. He also thought that exactly the same principles were used in the construction of temples, such as King Solomon's temple, stone circles such as Stonehenge and, later, churches and mosques. He thought that the metre, as a measure that had been kept *solis sacerdotibus* (reserved for the priesthood), was 'outed' for political reasons during the French Revolution.

These ideas stand in stark contrast to the views of John Michell, who detested the French metre and championed the imperial foot as the basis of the whole 'canonical' system of ancient measures that (like the metre) were based on the key dimensions of the earth. He believed, however, that these dimensions were expressed in 'canonical' numbers. These are numbers related to 12 and the powers of 12 that also respond to the numbers 7 and 11. For example, his 'canonical' distance, measured in imperial feet, for the meridional circumference of the earth through the poles is 12^6 × 44 = 131,383,296ft. This is about 70 miles longer than the latest scientific estimate. 131,383,296ft ÷ 22/7 = 41,803,776ft. This number, divided by 2, is equal to Michell's mean radius of the earth.

If 131,383,296ft is divided by 135 million the result is 0.9732096ft, the length of the 'Roman' foot that Michell had found in the dimensions of Stonehenge (100 of these Roman feet equalling the length of the inner diameter of the lintel ring).

Whilst divided on the relative merits of the French metre and the Imperial foot, the theories of Michell and Heinsch do actually have a lot in common. Both believed that there was a basic ancient measure, derived from the dimensions of the earth, that lay at the foundation of a world-wide system of ancient measures. Heinsch's numbers are also very similar to Michell's 'canonical' numbers. He wrote:

"The oldest basic units of length, in northern and eastern countries can generally be referred back to the metre by ratios involving whole numbers – especially multiples of 7 as measuring the diameter of a circle and multiples of 11 as measuring the circumference (with *pi* expressed in whole numbers as 22/7)."

Heinsch's Stonehenge lintel ring has a diameter of 31.5 metres which is exactly three times as wide as his holy of holies of Solomon's temple (10.5m × 3). Its circumference, using 22/7, is 99 metres and this is three times as long as the circumference of the circle that can be inscribed within the square of the holy of holies floor plan.

A circle inscribed within the square of the South Dorset grid pattern has a circumference that is exactly 800 times the size of the circumference of the circle inscribed within Heinsch's holy of holies. It is 8,400m (which is 12 × 700) × 22/7 = 26,400m (= 800 × 33).

I do not have space to give a detailed description of Michell's system of ancient measures as further elaborated by his friend John Neal in his book entitled *All Done with Mirrors* (2000). It turns out, in fact, not to be very helpful when considering the units of measure used in the South Dorset landscape patterns. The royal cubit used in the construction of Solomon's temple, for example, is given the length of 1.728ft (526.6944mm) by Michell and Neal. (1.728 = $12^3 \div 1000$.) Neal gives ten different lengths for the royal cubit according to his system of classification, but the closest he gets to 525mm is 525.5mm (a length that he calls the 'Root Canonical'). If this is correct then Heinsch is wrong about the dimensions of the holy of holies and the South Dorset grid pattern is not, therefore, a scale model at 1:800. There is excellent evidence, however, of a royal cubit measuring 525mm from two measuring rods known from the Saqqara tomb of Maya, the treasurer of Tutankhamun, and a third from the tomb of Kha (TT8) in Thebes. The one shown in *figure 2* is the rod now preserved at the museum in Turin.

Figure 2

The Wikipedia entry on Egyptian ancient measures states that royal cubits (measuring 525mm) were used for land measurements such as roads and fields. Each cubit was divided into 28 digits of 18.75mm. There were 16 'digits' in an Egyptian foot (300mm) and 24 'digits' in a small cubit (450mm). This also comprised 6 'hands' of 75mm. A seventh 'hand' was added to create the royal cubit. 100 royal cubits (52.5m) were called a 'rod' and 20,000 royal cubits (10.5km) were called a 'schoenus'. Livio Catullo Stecchini, in his Appendix to Peter Tompkin's *Secrets of the Great Pyramid* (1971), states that an ancient Egyptian acre had the area of a square with sides of 1,000 royal cubits. The South Dorset grid pattern comprises 256 of these acre squares.

Neal also gave ten different lengths for the Roman foot. Michell only gave a shorter and longer value of this measure. The shorter value is 0.96768ft (294.9488mm) and the longer value,

already referred to, is 0.9732096ft (296.6342mm). It is known, however, that Marcus Vipsanius Agrippa (64/62BC – 12BC) standardised the length of the Roman foot at about 296.2mm. This value is derived from the height of the imperial column of Marcus Aurelius (completed by 193 AD), shown in *figure 3*.

Figure 3

There is an inscription on this column stating that it is 100 feet in height. It measures 29.62 metres. Further confirmation is provided by two of the six well-preserved rules found at Pompeii (destroyed in AD 79), one measuring 296.2mm and the other measuring 296.3mm. Neal suggests that both these rules are intended to represent his Standard Geographic Roman foot of 0.9732096ft (296.63mm). It seems far more likely, however, that they represent Agrippa's standardised Roman foot.

Of particular interest to my studies of the south Dorset landscape patterns is a measure known as the *pes Drusianus* (Drusian foot). When seeking to explain Heinsch's views on the metre, Nigel Pennick wrote in his Foreword to Michael Behrend's 1973 English translation of Heinsch's *Principles of Prehistoric Sacred Geography*:

"To the metrologist, Heinsch's use of the Metre as a linear measure may appear puzzling. Even more surprising may be the discovery of recurrent integral metric distances in megalithic structures, until it is realized that the metre probably corresponds with a 'yard' of 3 of the 'pes drusinianus' (*sic*), an ancient measure corresponding to a little more than 33.3 centimetres."

Heinsch had been particularly impressed by the demonstration of his Principles provided by the mysterious stone circles at Odry in central Poland. He wrote:

"… it seems only natural that the stone circles at Odry should contain as the centrepiece of the pattern a clearly-defined double square of exactly 42 × 84m, passing through the centres of circles III, IV and X and also the tops of hills 8 and 5."

Figure 4
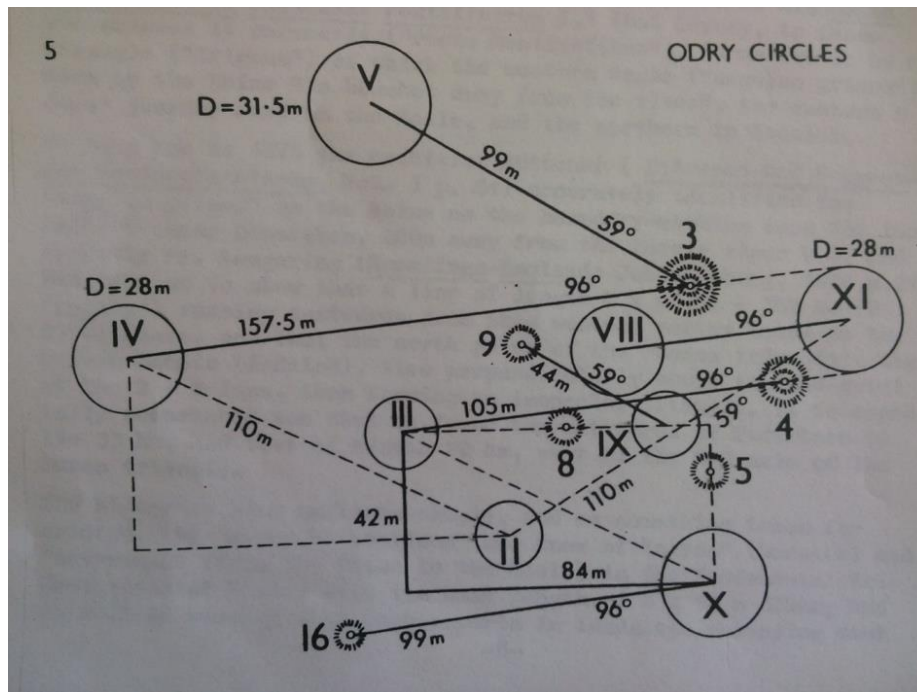
He was unaware that the Odry site is not as old as it seems. There is general agreement that it dates from the first or second centuries AD and can, in fact, be regarded as roughly contemporary with the South Dorset landscape patterns. The triangle set out by the position of the churches at Martinstown, Dorchester and Preston that provided me with the first indication of the grid pattern, exactly fits within a double square measuring 4,200 by 8,400 metres. This is obviously 100 times the size of the Odry pattern. It is quite possible that the Odry site and the South Dorset site were both laid out in a unit of 3 *pes Drusianus*. This might be called a 'yard' or a 'double cubit', a cubit being 1.5ft. (A double royal cubit was called a 'reed'.)
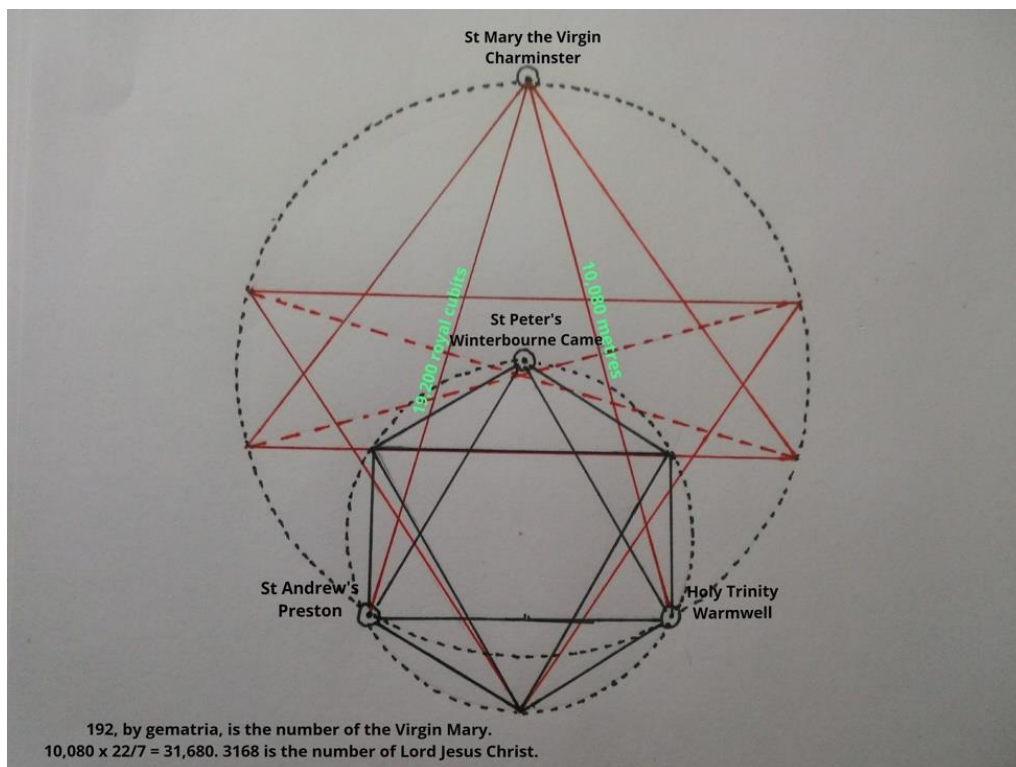
The *pes Drusianus* is named after Nero Claudius Drusus (died 9 BC) who was a contemporary of Marcus Vipsanius Agrippa. Both were generals and Drusus launched the first major campaigns across the Rhine. He also adopted a widely used linear measure from the Tungri tribe and established it as a standard for all Roman provinces bordering Germania. It is quite likely that this was amongst the Roman measures that were introduced to Britain after the invasion in 44 AD.

The author of *De Astronomia*, Gaius Julius Hyginus (64 BC – AD 17), recorded that the *pes Drusianus* was equal in length to a Roman foot plus *sescuncia*, or one eighth. Perhaps it was Drusus who standardised the *pes Drusianus* at exactly 9/8ths of Agrippa's standardised Roman foot of 296.2mm.? Werner Heinz, in his scholarly contribution entitled *History of Medieval Metrology*, to the *Handbook of Medieval Culture*, Vol 2 (2015) concluded that the

pes Drusianus was equal to 296.2mm + 1/8th = 333.225mm. If applied (in a unit of 3) to the South Dorset grid pattern, this would have the effect of reducing the length of a side of the grid on the map from 8,400m to 8397.27m. This is a difference of only 2.73 metres.

John Neal made the *pes Drusianus* 9/8ths of his Roman foot of 0.9732096ft (296.63mm). This is 333.708mm and a 'yard' or double cubit of this unit is one forty millionth of Michell's canonical meridional circumference of the earth through the poles. For this reason, Neal called it the 'true' metre. As it happens, however, the slightly shorter *pes Drusianus* of 333.225mm, if multiplied by 3, provides a more geodetically accurate 'metre' either than the modern French version or Neal's 'true' metre. Neal's 'true' metre would have the effect of increasing the length of the sides of the grid pattern from 8,400 metres to 8,409.44 metres. I think that this is a little too long when measuring the distance between the church symbols of Martinstown and Preston on the map at scale 1:25,000. It is, of course, possible that Agrippa's standardised Roman foot was somewhere between 296.2 and 296.3mm. This would make a unit of 3 *pes Drusianus* even closer in length to a modern metre.

Figure 5

192, by gematria, is the number of the Virgin Mary.
10,080 x 22/7 = 31,680. 3168 is the number of Lord Jesus Christ.

It is also very striking that the royal cubit of 525mm gives rise to a metre measure, whether intended or not. A 'schoenus' of 20,000 royal cubits, for example, is equal to 10.5km. This is the diameter of the circle enclosing the isosceles triangle formed by the positions of the churches at Preston, Warmwell and Charminster (See *figure 5*). The sides measure 19,200 royal cubits which are equal to 10,080 metres. 10,080 × 22/7 = 31,680 and 3168 is John Michell's supreme canonical number in the Christian era. It is the numerical value of the letters spelling the Greek words for the phrase 'Lord Jesus Christ.'

It is clear to me that the designers of the South Dorset landscape patterns must have been aware both of the length of the royal cubit and of the metre that they probably knew as a 'double cubit' of the *pes Drusianus*. They explored the interplay between the 'canonical' numbers expressed in these two units of measure.

Contemporary with the development of Christian Gnosticism was a pagan Gnosticism based on the works of a supposed ancient Egyptian sage known as Hermes Trismegistus. This *Corpus Hermeticum* was believed by the followers of this version of Gnosticism to date from at least the time of Moses, if not Abraham. Ancient Egyptian religion was seen by Clement of Alexandria as foreshadowing Christianity. This interest in all things Egyptian during the first few centuries AD might well have included their system of linear measures. Moses, after all, took the Israelites out of Egypt and would have used Egyptian measures in the construction of the Tabernacle, housing the Ark of the Covenant. It would have been only natural to have preserved these measures when moving the Ark to the holy of holies of Solomon's temple. This logic could have led gnostic Christians to try to rediscover the true dimensions of the holy of holies on the basis of ancient Egyptian measures, explaining the presence of the royal cubit in the South Dorset landscape.