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STONEHENGE, A TEMPLE RESTOR'D TO THE BRITISH DRUIDS



BY
WILLIAM STUKELEY

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**Stonehenge, A Temple Restor'd
to the British Druids**





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Stonehenge, A Temple Restor'd to the British Druids

By

William Stukeley



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PUBLISHER'S PREFACE

About the Book

"Like Lockyer's *Stonehenge and Other British Stone Monuments Astronomically Considered*, William Stukeley's 1740 study of Stonehenge stands out among the huge number of books on the subject. Stukeley was a pioneer preservationist. He lamented the callous treatment of the majestic ruins both by tourists and landholders. He coined the term 'trilithon' for the doorway-like arrangement of three stones, now common in the literature about megalithic architecture. Stukeley was one of the first to make accurate drawings of the site. The three dozen illustrations to this book, which show Stonehenge from every angle and document its context in the 18th century landscape, are still used today by scholars. He also did some rudimentary archeology, and describes opening the grave of a warrior princess.

Stukeley's *Stonehenge* was intended to be the first volume in a comprehensive study of universal history, which he never completed. He believed a pure form of Christianity was the original religion of mankind, which had been subverted by idolatry, and finally restored by Jesus. Stonehenge was a temple of this primordial patriarchal religion, built by immigrants from the Near East, possibly Phoenicians. They became the progenitors of the Celts, founded the Druid religion and built the mysterious standing stones. (Today scholars believe that Stonehenge was constructed by an indigenous, pre-Celtic, pre-Druid culture).

It is remarkable that two centuries later Lockyer also propounded a theory that Stonehenge was built by immigrants from the Near East. Also of note is Stukeley's discovery of vast linear features in the vicinity of Stonehenge. This of course anticipated Watkins' ley lines. He points out one case where these lines have Roman roads constructed over them, indicating that they could not be Roman in origin. He describes a huge oval track in the landscape, which he hypothesized was an ancient horse race course! Stukeley also proposed that the builders of Stonehenge used a standard measurement, anticipating the 'Megalithic yard' which was suggested in 1955 by Alexander Thom.

Stukeley was adamant that Stonehenge was pre-Roman (a view held by some at the time). He believed that it was constructed about 460 B.C. (currently it is believed that it dates back as far as 3000 B.C.) He arrived at this date by assuming that the builders had a knowledge of the compass, and by extrapolating variations in magnetic north, which he incorrectly assumed oscillated in a regular pattern (today we know that the magnetic North pole moves somewhat at random). However, this was one of the first attempts to associate the alignment of the monument with some natural phenomena, and to use it to date the structure."

(Quote from sacred-texts.com)

About the Author

William Stukeley (1687 - 1765)

"The Rev. Dr. William Stukeley FRS, FRCP, FSA (November 7, 1687 - March 3, 1765) was an English antiquary who pioneered the archaeological investigation of Stonehenge and Avebury and was one of the founders of field archaeology.

He was born at Holbeach in Lincolnshire (where a Primary School now takes his name - on the site of Stukeley Hall), the son of a lawyer. After taking his M.B. degree at Corpus Christi College, Cambridge, he went to London and studied medicine at St Thomas's Hospital. In 1710, he started in practice in Boston, Lincolnshire, moving back in 1717 to London. In the same year, he became a fellow of the Royal Society and, in 1718, joined in the establishment of the Society of Antiquaries, acting for nine years as its secretary. In 1719 he took his M.D. degree and in 1720 became a fellow of the Royal College of Physicians, publishing in the same year his first contribution to antiquarian literature.

Stukeley was one of the first learned gentlemen to be attracted to speculative freemasonry, newly fashionable after the appointment of the first noble Grand Master. His Diary and Commonplace Book of June 6, 1721 says "I was made a Freemason at the Salutation Tav., Tavistock Street, with Mr. Collins, Capt. Rowe, who made the famous diving Engine." The same entry says he was the first person for many years who had been so made in London; there was great difficulty in finding sufficient members to perform

the Ceremony; and immediately thereafter "Freemasonry took a run and ran itself out of breath through the folly of its members."

His diary and papers are among the earliest sources on the subject of the new Grand Lodge.

His principal works, elaborate accounts of Stonehenge and Avebury, appeared in 1740 and 1743. These were supposed to be the first of a multi-volume universal history. Stukeley proposed that an ancient patriarchal religion was the original religion of mankind. This had subsequently degenerated as idol-worship had emerged. Stukeley believed that the Druids and the early Christians were examples of this religion. Stukeley himself was a Protestant. (Source: *Stonehenge, a Temple Restored*, by Stukeley)

His work on Stonehenge is one of the first to attempt to date the monument (source: Gerald S. Hawkins, *Stonehenge Decoded*, 1965). He proposed that the builders of Stonehenge knew about magnetism, and had aligned the monument with magnetic north. Stukeley used some incomplete data about the variation of the North Magnetic Pole; he extrapolated that it oscillated in a regular pattern. Today it is known that the North Magnetic Pole wanders in an irregular fashion. However, Stukeley inferred that Stonehenge was completed in 460 B.C., which as we now know is several thousand years too late.

He wrote copiously on other supposed Druid remains, becoming familiarly known as the "Arch-Druid." In 1729 he took holy orders, and, went on to hold two livings in Lincolnshire, including that of the parish of All Saints, Stamford, Lincolnshire, where he did a considerable amount of further research, not least on the town's lost Eleanor Cross. He was subsequently appointed rector of a parish in Bloomsbury, London. He died in London on the 3rd of March 1765.

In 1742 he visited the cave at Royston and a year later he published his *Palaeographia Britannica or discourses on Antiquities in Britain no.I, Origines Roystoniana, or an account of the Oratory of lady Roisia, Foundress of Royston discovered in Royston in August 1742*. Following a response by the Reverend Charles Parkin he penned the sequel: *Palaeographia Britannica or discourses on Antiquities in Britain no.II, or defense of Lady de Vere, Foundress of Roiston, against the Calumny of Mr. Parkin, rector of Oxburgh wherein his pretended answer is fully refuted: the*

former opinion further confirm'd and illustrated. To which are occasionally added, many curios matters in antiquity.

Stukeley was a friend of Isaac Newton and wrote a memoir of his life (1752)."

(Quote from wikipedia.org)

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DEDICATION

TO accept of this attempt to illustrate one of the noblest antiquities now left upon earth. I am confident your Grace will not dislike it, either because it is a religious antiquity, or because it belongs to our own country.

Your Grace best shews your regard to religion, by a constant attendance on its duties, in the service of the church; and by a regular practice of its precepts, in their whole extent. And as you are justly sensible, the foundation of religion rests on a careful observance of the sabbath: you not only study to encourage it, by your own great example; but likewise discountenance, that too fashionable custom of travelling on sundays, and other profanations thereof: which are the sure root of national corruption, the sure presage of national ruin.

Nor are your Grace's virtues more conspicuous, in your religious and moral character, than in the love of your country. This you inherit with the blood that runs in your veins; this you derive from an immemorial series of noble ancestors, renowned in our annals, for their ready allegiance to the sovereign power; for their vigor in support of the constitution both in church and state; that have often hazarded and ruined their fortunes, and poured out their blood, in its defence. I might instance particularly, the great part they bore in the Reformation, the Restoration and the Revolution.

After the honour I have enjoyed of having been long known to your Grace: I could enlarge upon the amiable qualities of your private life, your domestic and social virtues, your humane and beneficent disposition to all around you, friends or dependants, or those of your own family. With truth I might say, that you never refused to serve any person that applied to you, where it was in your power: that you never knowingly did an unkind, an injurious thing to any person: that no one ever withdrew griev'd from your presence. I can safely affirm, and fear no contradiction, that justice, honour and honesty are some of the real jewels, that adorn your Grace's coronet. And

they, at this time of day, receive a seasonable lustre, from your high nation, and illustrious birth.

But the agreeableness of the subject insensibly drew me from my main purpose, which was to make this publick acknowledgment, of the great favours your Grace has confer'd upon me: and to beg leave to profess myself,

May it please your GRACE,

Your GRACE'S most humble,

And most devoted servant,

Jan. 1. 1739-40.

William Stukeley.



PREFACE

A few years ago I spent some time every summer in viewing, measuring, and considering the works of the ancient Druids in our Island; I mean; I mean those remarkable circles of Stones which we find all over the kingdom, many of which I have seen, but of many more I have had accounts. Their greatness and number astonish'd me, nor need I be afraid to say, their beauty and design, as well as antiquity, drew my particular attention. I could not help carrying my inquiries about them as far as I was able. My studies this way have produc'd a vast quantity of drawings and writing, which consider'd as an intire work, may thus be intitled,

I. Canon Mosaicæ Chronologiæ, or the year of Moses settled, by which he reckons time in the history of the old world; the time of the year fix'd when creation was begun. This is done in a new manner, and becomes an intire system of chronology from the creation to the Exodus, and is exemplified by many particular Kalendars of the most remarkable transactions; which are proofs of the truth of the Canon. There are interspersed a great many astronomical and historical illustrations of the sacred pages, particularly Sanchoniathon's genealogies, and Manethon's Egyptian Dynasties, are applied in a new Method to the history and chronology of the Scriptures.

II. Melchisedec, or a delineation of the first and patriarchal religion, from the best light we can gather in the sacred history; and from the most ancient heathen customs, which were remains of that religion. In this Treatise it is shewn, that the first religion was no other than Christianity, the Mosaic dispensation, as a veil, intervening; that all mankind from the creation had a knowledge of the plurality of persons in the Deity.

III. Of the mysteries of the ancients, one of the first deviations from true religion, to idolatry; this is chiefly pursu'd in an explication of the famous table of Isis, or Bembin-table, publish'd by Pignorius, Kircher, &c. wherein that knowledge which the ancients had concerning the true nature of the Deity, is further explain'd.



IV. A discourse on the hieroglyphic learning of the ancients, and of the origin of the alphabet of letters. Very many hieroglyphic monuments of the Egyptians are explain'd, more especially those that relate to their true notions of the persons in the Deity. The time and rise of the alphabet of letters is deduc'd from a new foundation. The present square Hebrew characters are shewn to be the primitive idea of letters, from whence all others are deriv'd. Whence the idea of every letter was taken? an explanation of all the old Hebrew coins with Samaritan characters.

V. The patriarchal history, particularly of Abraham, is largely pursu'd; and the deduction of the Phœnician colony into the Island of Britain, about or soon after his time; whence the origin of the Druids, of their Religion and writing; they brought the patriarchal Religion along with them, and same knowledge of symbols or hieroglyphics, like those of the ancient Egyptians; they had the notion and expectation of the Messiah, and of the time of the year when he was to be born, of his office and death.

VI. Of the Temples of the Druids in Britain, their religious rites, orders, sacrifices, groves, tombs, their cursus's, places of forts and exercises, &c. particularly an ample and accurate description of that stupendous temple of theirs at Abury in North Wiltshire, the most august work at this day upon the globe of the earth; with many prints of ground plots, views and admeasurements of all its parts; of their manner of sepulture; an account of my digging into many of their barrows and tumuli, with drawings of them, &c.

VII. Of the celebrated Stonehenge, another Temple of theirs, with prints of that work; an account of the barrows I dug up, and what was discover'd in then; of the knowledge the Druids had of the magnetical compass, and conjectures of the particular times when these works were made, long before Cæsar arriv'd in Britain.

I propose to publish these two first, and proceed to the speculative parts afterwards; reserving them, God willing, to the maturer time of my life.

My intent is (besides preserving the memory of these extraordinary monuments, so much to the honour of our country, now in great danger of ruin) to promote, as much as I am able, the knowledge and practice of ancient and true Religion; to revive in the minds of the learned the spirit of Christianity, nearly as old as the Creation, which is now languishing among



us; to restore the first and great Idea of the Deity, who has carry'd on the same regular and golden chain of Religion from the beginning to this day; to warm our hearts into that true sense of Religion, which keeps the medium between ignorant superstition and learned free-thinking, between slovenly fanaticism and popish pageantry, between enthusiasm and the rational worship of God, which is no where upon earth done, in my judgment, better than in the Church of England. And feeling a spirit of Scepticism has of late become so fashionable and audacious as to strike at the fundamentals of all revelation, I have endeavour'd to trace it back to the fountain of Divinity, whence it flows; and shew that Religion is one system as old as the world, and that is the Christian Religion; that God did not leave the rational part of his creation, like the colony of an ant-hill, with no other guide than instinct, but proportion'd his discoveries to the age of the world, to the learning, wisdom, and experience of it; as a wise parent does now to his children. I shall shew likewise, that our predecessors, the Druids of Britain, tho' left in the extremest west to the improvement of their own thoughts, yet advanc'd their inquiries, under all disadvantages, to such heights, as should make our moderns asham'd, to wink in the sunshine of learning and religion. And we may with reason conclude, there was somewhat very extraordinary in those principles, which prompted them to such a noble spirit as produced these works, still visible with us, which for grandeur, simplicity and antiquity, exceed any of the European wonders.

That the doctrines and works of the Druids have hitherto been so little considered (since authors only transcribe from one to another, the few remaining scraps to be found in classic writers) was an incentive to me likewise in the following attempt, and at the same time it pleads for me, and bespeaks the reader's favour. I want likewise the great advantages to be had from a knowledge of the remaining Celtic languages, books, manuscripts, and history, the Cornish, Welsh, Irish, Highland, &c. the chief repository now of their doctrines and customs; so that in my own opinion I may very well say with the poet,

Interea Dryadum silvas & saxa sequamur
Intactas, tua Mecænas haud mollia jussa. Virgil.

And tho' there has been of late a large volume publish'd on the subject of Stonehenge, yet we may well say there has nothing been wrote upon the subject. Nor have I any other notion of this performance, than that it is as a



first attempt to say something upon those famous philosophers and priests the Druids, who are never spoken of in antiquity but with a note of admiration; and are always rank'd with the Magi of the Persians, the gymnosophists of the Indians, the prophets and hierophants of the Egyptians, and those sort of patriarchal priests, whose orders commenc'd before idolatry began; from whom the Pythagoreans, Platonists, and Greek philosophers learn'd the best things they knew. To clear away rubbish, and lay a foundation only, in this difficult and obscure work, is doing somewhat. The method of writing which I have chose is a diffusive one, not pretending to a formal and stiff scholastic proof of every thing I say, which would be odious and irksome to the reader, as well as myself. The knowledge I have acquired in these matters, was from examining and studying their works; the proofs are deriv'd from distant and different topicks, and it would be very inconvenient to marshal them syllogistically in a work of this nature; the proof results from the intire work; in all matters of so great antiquity it must be found out by the reader; and to one that has proper sagacity and judgment, conviction will steal upon him insensibly, if I am not mistaken; and he will own the evidence in general, is as strong as the nature of the subject will bear, or requires.

It was very disagreeable to me that I was forc'd to combat against a book publish'd in the name of the celebrated Inigo Jones, for whose memory I have the greatest regard. I wonder the publisher of that work did not think of a very easy method to convince himself that he was in an error. If Stonehenge is a Roman work, it was certainly built by the Roman scale; had he reduc'd his own measures to that standard, he would have seen the absurdity of his opinion; for we cannot think that a temple, or elegant building, as he would have it, should not shew its founders by the scale on which it is form'd; they are all fractions in the Roman scale, undoubted evidence that the Romans had no hand in it. For there is no meaning, no design in the choice of the measures, neither in general nor particular; a thing unworthy of a great architect, or a great design. But it appears very evident to me, that Inigo Jones had little or no part in that work, especially as it is moulded at present; and I think I have reason to be of opinion that he never drew the designs therein published, because I should be unwilling to say he knowingly falsified them. I have very much shortened what I had to say against that book, because I have no love for wrangling, and barely mention'd what was necessary, that the reader may have a true notion of this noble antiquity.



CHAPTER I.

OF the Situation of Stonehenge in general. That it was a temple of the Druids, of the patriarchal mode, who were a most ancient oriental colony. In later times, the Belgæ from the continent, conquer'd this country from them. Whence these stones were brought? Of their nature, magnitude, weight. Of the measure of the Druids, the ancient Hebrew cubit, and its proportion to the English foot.

THE Wiltshire downs, or Salisbury plain, (as commonly call'd) for extent and beauty, is, without controversy, one of the most delightful parts of Britain. But of late years great encroachments have been made upon it by the plough, which threatens the ruin of this fine champain, and of all the monuments of antiquity thereabouts. Monuments, we can scarce say, whether more wonderful in themselves, more observ'd, or less understood! among them, Stonehenge has been eminent from the remotest ages, tho' 'tis not the greatest, most considerable, or most ancient. But 'tis my intent to begin my discourse from it, because the latest, and from thence proceed upwards in our inquiries, about the times and authors of these stupendous works, the temples of the Druids in our Island: for I cannot doubt that Stonehenge was such. The idea we conceive of the distance of time, when these kind of works were made, cannot be ill-form'd, if we consider, that the utmost accounts of 'em we have in writing, are from the Britons, the remains of the people who lived here, at the time of the Roman invasion. This is mention'd in some manuscripts of Ninnius before the Saxons and Danes came over. And the oldest Britons speak of this only by tradition, far above all memorial. They wonder'd at Stonehenge then, and were as far to seek about the founders and intent of it, as we now. They have recourse to magic, as is usual, when they would account for any thing seemingly so much above human power, to accomplish. They tell us, these stones of immense bulk were brought from a plain, in the middle of Ireland, and the like. Which reports give us only no obscure hint of their true authors, the Druids, who were fam'd for magic, and were driven last into Ireland, in the time of the Romans. There they built such like works again, or their brethren had built before; till Christianity, to which the greatest and purest part of their own doctrine was akin, soon put TAB. I. an



end to their polity, which the Roman arms could not do. And they embrac'd that religion, to which their own opinions and rites had so direct a tendency. This is the sentiment of Origen on Ezekiel iv. And 'tis sufficiently evident, if we consider, that the first planters of Christianity in Ireland, immediately converted the whole island, without so much as the blood of one martyr. Nay, the Druids themselves, at that time the only national priests, embraced it readily, and some of them were very zealous preachers of it, and effectual converters of others. For instance, the great Columbanus himself was a Druid: the apostle of Ireland, Cornwall, &c. We need not be surpriz'd at this, when we assert, that there is very much reason to believe, these famous philosophic priests came hither, as a Phœnician colony, in the very earliest times, even as soon as Tyre was founded: during the life of the patriarch Abraham, or very soon after. Therefore they brought along with them the patriarchal religion, which was so extremely like Christianity, that in effect it differ'd from it only in this; they believed in a Messiah who was to come into the world, as we believe in him that is come. Further, they came from that very country where Abraham liv'd, his sons and grandsons; a family God almighty had separated from the gross of mankind, to stifle the seeds of idolatry; a mighty prince, and preacher of righteousness. And tho' the memoirs of our Druids are extremely short, yet we can very evidently discover from them, that the Druids were of Abraham's religion intirely, at least in the earliest times, and worshipp'd the supreme Being in the same manner as he did, and probably according to his example, or the example of his and their common ancestors.

All this I shall prove, in the pursuit of this work. But before we come to speculation, intend to give an exact description of their several temples, and the like works; for such will be a good foundation for us to build upon. That we may proceed from things evident and more known, to those less known, and which we design to make evident, as well as we are able, and the nature of it will permit. A matter so immers'd in the dark mist of time, where very few scatter'd traces remain, must needs bespeak the reader's candor. The dignity of the subject will excuse my boldness in attempting one so difficult. And however I succeed in accounting for these wonderful works; at least, I shall be instrumental in preserving their memory, in giving just drawings of them.

Stonehenge, by the extravagant grandeur of the work, has attracted the eyes and admiration of all ages. After the reformation, upon the revival of learning among us, the curious began to consider it more intimately, I



cannot say successfully. Mr. Camden rose as the sun of antiquity, that put out former lights, and, like Cæsar, affrights all that value a reputation, from attempting any thing in his way. His great skill in Roman learning, and our English history, only enabled him to be, as it were, silent on Stonehenge. He saw with excellent judgment, that neither Roman nor English had place there, or could serve to illustrate it. He writes modestly, as his manner was; "Of these things I am not able so much to give an accurate account, as mightily to grieve, that the founders of this noble monument cannot be trac'd out." He could not persuade himself that either Romans, Saxons or Danes had any hand in it. And as for his representation of it in picture, I verily believe, it was drawn only from fancy or memory, or by some engraver from his oral description. A.D. 1620, king James I. being at the earl of Pembroke's seat at Wilton, and agreeably surpriz'd with the sight of Stonehenge, consulted the famous architect Inigo Jones, upon it; thinking it a matter in his way. This great man, who deservedly may be stiled the English Vitruvius, gave his opinion of it, as a Roman work; and left, I suppose, some few indigested notes in writing thereupon.

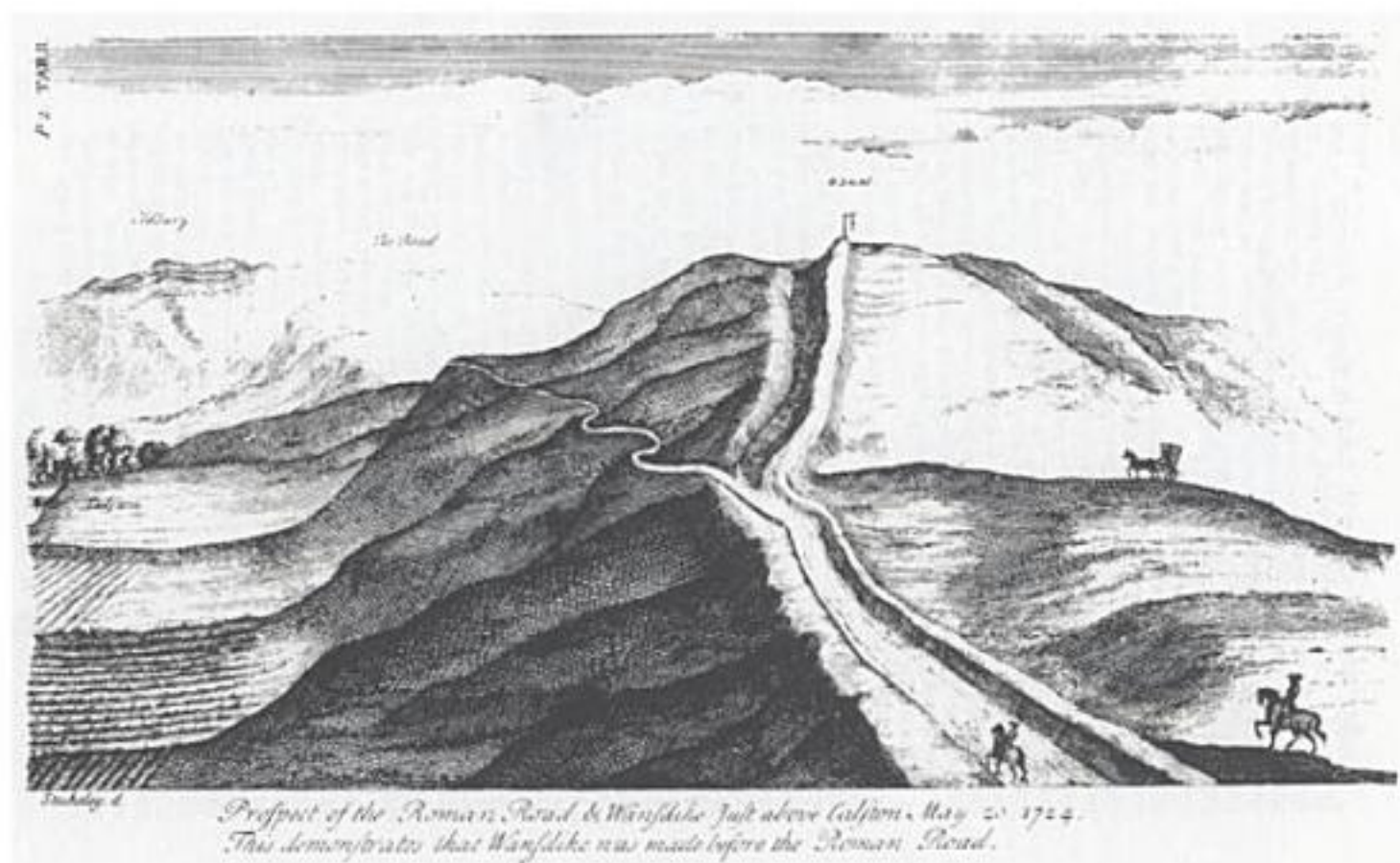


Plate 2. Prospect of the Roman Road and Wansdike Just above Calston, May 20, 1724. This demonstrates that Wansdike was made before the Roman Road.

From which his son-in-law John Webb compos'd an intire treatise, endeavouring to prove it. But they that are acquainted with Roman

architecture, or have consider'd Stonehenge, must needs be of a different opinion. And as my Lord Bishop of London well observes, in his notes on Camden, "it cannot be safe to close with Mr. Jones, tho' his book otherwise be a learned and ingenious piece." Inigo Jones lived 30 years after this, and yet Mr. Webb makes an apology for his work, "that if he had surviv'd to have done it, with his own and, it would have been better." But 'tis very reasonably believ'd, that tho' Inigo Jones was an extraordinary genius in architecture, yet he wanted many qualifications for an author, especially in such a work as Stonehenge. 'Tis my opinion, that had his architectonic skill been united to Mr. Camden's learning, he could never have demonstrated Stonehenge to be a Roman work. Afterwards, Dr. Charlton publish'd a piece against Webb's performance, and certainly has said enough to overthrow it, tho' he could not with equal success establish his own opinion, that it was the work of the Danes. Whereas Olaus Wormius finds no such monuments among the Gothic nations: which, as Mr. Toland observes, is answer sufficient to his allegation. Webb answer'd the Doctor's book, and by turns effectually demolish'd his opinion, but could not still vindicate his own. Yet from all their disputations, no spark was struck, towards a discovery of the real truth. What is the worst part in both performances of Mr. Webb, his representation of the real monument in his drawings, is fictitious. And, as Mr. Aubry rightly observes, "in endeavouring to retrieve a piece of architecture in Vitruvius, he abuses the reader with a false representation of the whole." It requires no great pains to prove this, nor need we take much time to be satisfy'd in it: the work is still extant. As soon as a judicious eye comes upon the spot, we discern that Webb's equilateral triangles forming the cell are fancies: his three entrances across the ditch are so too; and that he has turn'd the cell a sixth part from its true situation, to savour his imaginary hypothesis. But 'tis against my inclination to find fault with the labours of others, nor do I thereby seek to bribe the reader in my own favour. I had a great pleasure for several years together, in viewing and examining these noble remains of our ancestors. What I wrote about them, was for my private amusement, and that of friends. And I publish them only for the honour of my country, and in hopes that such a publication will not be unserviceable to religion; which is my ultimate view.

Tho' Stonehenge be the proudest singularity of this sort, in the world, as far as we know: yet there are so many others, manifestly form'd upon the same, or kindred design, by the same measure, and for the same purpose, all over the Britanic isles; that we can have no room to doubt of their being made by the same people, and that by direction of the British Druids. There



are innumerable, from the land's end in Cornwall, to the utmost northern promontory in Scotland, where the Roman power never reach'd. They are to be found in all the islands between Scotland and Ireland, isle of Man, all the Orkney islands, &c. and numerous in Ireland itself. And there is no pretence, as far as I can see, for any other persons or nations being the founders of them. They are circles of stones, generally rude, of different diameters, upon elevated ground, barren, open heaths and downs; chiefly made of stones taken from the surface of the ground. There are no remembrances of the founders, any other than an uninterrupted tradition of their being sacred; that there is medicinal virtue in them; that they were made by the Irish; that they were brought from Afric; that they were high-places of worship; sanctuaries; bowing, adoring places; and what names they commonly have, intimate the same thing. And in many places the express remembrance and name of Druids remain, and the people bury their dead in or near them to this day, thinking them holy ground. Mr. Toland in his history of the Druids, p. 23. tells us, "In Gealcossa's mount in Inifoen in the county of Dunegal, a Druidess of that name name lived; it signifies white-legg'd, according to the ancient manner in Homer's time. On that hill is her grave and her temple, being a sort of diminutive Stonehenge, which the old Irish, at this day, dare not any way profane." Many instances of this sort, of all these particulars, we have in our island: particularly the temple on Temple-downs by Abury. Whatever is dug up in or near these works are manifestly remains of the Druid times; urns, bones, ornaments of amber, glass beads, snake-stones, amulets, celts, flint-hatchets, arrow-heads, and such things as bespeak the rudest ages, the utmost antiquity, most early plantations of people that came into our island, soon after Noah's flood. I have all the reason in the world to believe them an oriental colony of Phœnicians; at least that such a one came upon the first Celtic plantation of people here: which reasons will appear in the progress of this discourse. I suppose in matters of such extraordinary antiquity, it would be absurd to set about a formal demonstration; and those readers would be altogether unreasonable, that expect we prove every fact here, as they would do by living witnesses, before a court of judicature. When all is consider'd, that I have put together on this affair, a judicious person, I presume, will agree, I have made the matter sufficiently evident, and as much as the nature of things requires.

In the times just preceding the coming of the Romans into Britain, the Belgæ, a most powerful colony from the Gallic continent, had firmly seated themselves all over the country, where Stonehenge is situate, quite to the

southern sea; taking in the south part of Wiltshire, and all Dorsetshire. Wiltshire has its name from the river Willy, which in Welsh is *wyli*, in Latin, *vagire*, from its noise. A river of like name in Northamptonshire. Upon the former river at Wilton, probably liv'd the Carvilius, one of the four kings that fought Julius Cæsar, the picture of whole tumulus we have given towards the end. The Belgæ came into Britain upon the south, as other Celtic nations before had fix'd themselves from the east, Kent, the Thames, &c. such as the Cantii, Segontiaci, Atrebates, &c. so that in Cæsar's time, all the south and east parts of Britain were dispossess'd of their original inhabitants, and peopled from the continent: and this very work of Stonehenge was in the hands of the Belgæ, who built it not. In my *itinerarium curiosum*, p. 181. I observ'd no less than four successive boundary ditches here, from the southern shore; which with good reason, I suppos'd, were made by the Belgæ, as they conquer'd the country by degrees, from the aboriginal inhabitants. This shews, they must have been a long while about it, that the Britons disputed every inch of ground with them, and that for two reasons; as well because of the extraordinary beauty and goodness of the country, as fighting *pro aris & focis* for their great temple of Stonehenge: not to speak of that other greater temple, a little more northward, at Abury. The Segontiaci had got Hampshire, to the east of them, before, as far as the Colinburn river, and the Atrebates, Berkshire. The first ditch runs between the river of Blandford, formerly *Alauna*, and the river of Bere, the piddle in Dorsetshire, two or three miles south of it. The second runs to the north of Cranborn chase, upon the edge of Wiltshire, by Pentridg: it divides the counties of Dorset and Wilts. The third is conspicuous upon Salisbury plain, as we pass from Wilton to Stonehenge, about the two-mile stone, north of Wilton: it is drawn between the river Avon and the Willy, from Dornford to Newton. The fourth is the more famous Wansdike, of great extent. *Gwahan* in old British signifies *separatio*, *distinctio* *guahanu seperare*, and that undoubtedly gave name to the ditch. The method of all these ditches, is, to take the northern edge of a ridge of hills, which is always steep; the bank is on the south side. And in my *itinerary*, p. 134. I show'd a most evident demonstration, that it was made before the time of the Romans, in the passage of the Roman road down Runway hill. TAB. II. Wansdike is the last advanc'd post of the Belgæ northwards, and that it was made after Stonehenge was built, is plain, because the stones that compose the work, were brought from Marlborough downs in north Wiltshire, beyond the dike; and as then in an enemy's country. And most probably it was built before the Belgæ set footing in Britain, because of the great number of barrows or sepulchral



tumuli about it, which, no doubt, were made for the burial of kings and great men.



Plate 3. Prospect of Stonehenge from the East by Vespaſians camp

The stones of which Stonehenge is compos'd, beyond any controversy, came from those called the gray weathers, upon Marlborough downs near Abury; where is that other most wonderful work of this sort, which I shall describe in my next volume. This is 15 or 16 miles off. All the greater stones are of that sort, except the altar, which is of a still harder, as design'd to resist fire. The pyramidals likewise are of a different sort, and much harder than the rest, like those of that other Druid temple call'd the Weddings, at Stanton-drew in Somersetshire. Dr. Halley was at Stonehenge in the year 1720, and brought a piece of it to the Royal Society. I examin'd it with a microscope. 'Tis a composition of crystals of red, green and white colours, cemented together by nature's art, with opaque granules of flinty or stony matter. The Doctor observ'd from the general wear of the weather upon the stones, that the work must be of an extraordinary antiquity, and for ought he knew, 2 or 3000 years old. But had the Doctor been at Abury, which is made of the same stones, he might well from the like argumentation conclude, that work as old again as Stonehenge, at least much older, and I verily believe it. Nevertheless the current of so many ages has been more merciful to Stonehenge, than the insolence of rapacious hands, (besides the general saccage brought upon the work of old) by the unaccountable folly of mankind, in breaking pieces off with great hammers. This detestable practice arose from the silly notion of the stones being factitious. But, alas! it would be a greater wonder to make them by art, than to carry them 16 miles by art and strength; and those people must be inexcusable, that deface the monument for so trifling a fancy. Another argument of vulgar incogitancy, is, that all the wonder of the work consists,

in the difficulty of counting the stones; and with that, the infinite numbers of daily visitants busy themselves. This seems to be the remains of superstition, and the notion of magic, not yet got out of peoples heads, since Druid-times. But indeed a serious view of this magnificent wonder, is apt to put a thinking and judicious person into a kind of ecstasy, when he views the struggle between art and nature, the grandeur of that art that hides itself, and seems unartful. For tho' the contrivance that put this massy frame together, must have been exquisite, yet the founders endeavour'd to hide it, by the seeming rudeness of the work. The bulk of the constituent parts is so very great, that the mortaises and tenons must have been prepar'd to an extreme nicety, and, like the fabric of Solomon's temple, every stone tally'd; and neither axes nor hammers were heard upon the whole structure. Nevertheless there is not a stone at Stonehenge, that felt not, more or less, both ax and hammer of the founders. Yet 'tis highly entertaining to consider the judicious carelessness therein, really the grand gusto, like a great master in drawing, secure of the effect: a true master-piece. Every thing proper, bold, astonishing. The lights and shades adapted with inconceivable justness. Notwithstanding the monstrous size of the work, and every part of it; 'tis far from appearing heavy: 'tis compos'd of several species of work, and the proportions of the dissimilar parts recommend the whole, and it pleases like a magical spell. No one thinks any part of it too great or too little, too high or too low. And we that can only view it in its ruins, the less regret those ruins, that, if possible, add to its solemn majesty.

The stones of the gray weathers are of a bastard sort of white marble, and lie upon the surface of the ground, in infinite numbers, and of all dimensions. They are loose, detach'd from any rock, and doubtless lay there ever since the creation, being solid parts thrown out to the surface of the fluid globe, when its rotation was first impress'd. All our Druid temples are built, where these sort of stones from the surface can be had at reasonable distances; for they are never taken from quarries. Here is a very good quarry at Chilmark in this country. Salisbury cathedral, and all the great buildings are thence; but 'tis a stone quite different to our work. It was a matter of much labour to draw them hither, 16 miles. My friend the reverend Dr. Stephen Hales, the excellent author of vegetable statics, and other works, computed them as follows. The stone at the upper end of the cell, which is fallen down and broke in half, is in length (says he) 25 feet, in breadth 7 feet, and in thickness at a medium $3\frac{1}{2}$, amounts to 612 cubic feet. Now a cubic foot of Hedington stone weighs near $154\frac{1}{4}$ pounds troy. If



Stonehenge stone be of the same specific gravity, it will amount to 94,348 pounds, which is $31\frac{1}{2}$ tuns. But is this be of the same specific gravity as Burford stone, which weighs to $155\frac{1}{4}$ the cubic foot, then it will weigh 95319 pounds troy, or 32 tuns. Is it be equal to Blaidon stone, which is 187 pounds troy per cubic foot, then it weighs 114444 pounds troy, or 38 tuns. But I am sure that the stone is of considerably larger dimensions, than what Dr. Hales has stated it at, and that the sort of stone is much heavier than that of the largest specific gravity he speaks of, and that it amounts to more than 40 tuns, and requires more than 140 oxen to draw it; yet this is not the heaviest stone at the place.

The notion we ought to entertain of Stonehenge is not a little enhanc'd, by the discovery I made from frequent mensurations there. It gave me the opportunity of finding out the standard and original measure, which the people us'd, who made this and all other works of this kind. And this precludes any tedious disputation against the opinion of authors; for whoever makes any eminent building, most certainly forms it upon the common measure in use, among the people of that place. Therefore is the proportions of Stonehenge fall into fractions and uncouth numbers, when measur'd by the English, French, Roman, or Grecian foot, we may assuredly conclude, the architects were neither English, French, Roman or Greeks. Thus, for instance, when the accurate Greaves tells us, the door of the Pantheon (which is of one stone) is of English foot-measure 19 foot $\frac{603}{1004}$ within: should we not be apt to assert at first sight, that the architect in so costly a work, did not chuse his measures at random, but intended that this dimension should be 20 feet? When we consider this building is at Rome, and that it amounts to 20 Roman feet, must we not conclude, it was erected by the Roman standard? adding too, that all the rest of the dimensions of this stately structure fall aptly and judiciously into the same scale. So as long as any vestigia of St. Paul's cathedral remain, the English foot, by which it was built, will easily be known. I must prepare the reader for a right understanding of our Druid edifices, by informing him, that Stonehenge, and all other works of this nature in our island, are erected by that most ancient measure call'd a cubit, which we read of in the holy scriptures, and in ancient profane authors. I mean the same individual measure, call'd the Hebrew, Egyptian, Phœnician cubit; most probably deriv'd from Noah and Adam. 'Tis the same that the pyramids of Egypt and other [of] their works are projected upon; the same as that of Moses's tabernacle, Solomon's temple, &c. and we may reasonably pride ourselves in possessing these visible monuments of the old measure of the

world. My predecessor Bishop Cumberland shows, enough to satisfy us, that the Egyptian and Hebrew measure was the same, tho' he has not hit upon that measure, to a nicety. My friend and colleague Dr. Arbuthnot has been more successful, in applying it to such parts of the greater pyramid, as evidently establish its proportion, to our English foot, from the measures Greaves has left us: and shows it to be 20 inches and $\frac{4}{5}$ of English measure. Thus the Doctor observes the side of the greater pyramid at base, is 693 English feet; which amounts exactly to 400 Egyptian cubits, a full and suitable number for such a square work, and without question the originally design'd measure, the stadium of old. I have taken notice that Inigo Jones observ'd the like dimensions, in laying out the plot of Lincoln's-Inn-fields. The Doctor adds many more instances, deduc'd in the same way, to confirm it. I add, that Greaves says, the lowermost steps of the pyramid are near 4 feet in height, which amounts to 2 cubits and 2 palms. They are 3 foot in breadth, i.e. 1 cubit 4 palms. The length of the declining first entrance is 92 feet and an half, i.e. 55 cubits. The length of the next gallery is 110 feet, which amounts to 60 cubits. There is another gallery in the pyramid, of the same length. Mr. Webb says the diameter of Stonehenge is 110 feet. This would tempt one to suspect the same measure us'd in both. Thus the diameter of the like work at Rowldrich in Oxfordshire, describ'd by Dr. Plot, is 35 yards, i.e. 110 feet, grossly measur'd. Father Brothais in his observations on upper Egypt, in our Phil. Trans. found a door-case made of one stone, in a magnificent building, it was $26\frac{1}{2}$ feet in height, this is 15 cubits. Dr. Huntington, in the same Trans. says, he found the sphynx standing by the northern pyramids to be 110 feet in circuit, i.e. 60 cubits. Ptolomy in his IVth book, and Pliny XXXVI. speak of the obelisk rais'd by king Rameses at Heliopolis, which Mr. Webb, p. 34. gives the length of in English feet, 136. This is 80 cubits. That which Augustus set up in the circus maximus at Rome upon reduction of Egypt, Webb says, is 120 feet 9 inches, which amounts to 70 cubits. Another, Augustus set up in the campus martius, which he says is 9 foot higher, i.e. 5 cubits. He speaks again of that erected by Fontana before St. Peter's, 81 feet, which was 50 cubits. I suppose the base being injur'd, it was cut a little shorter. This at the base, he says, is 9 foot square, i.e. 5 cubits. The Vatican obelisk is 170 foot high, which is too cubits. 12 foot broad at bottom, which is 7 cubits; at top a third part less.

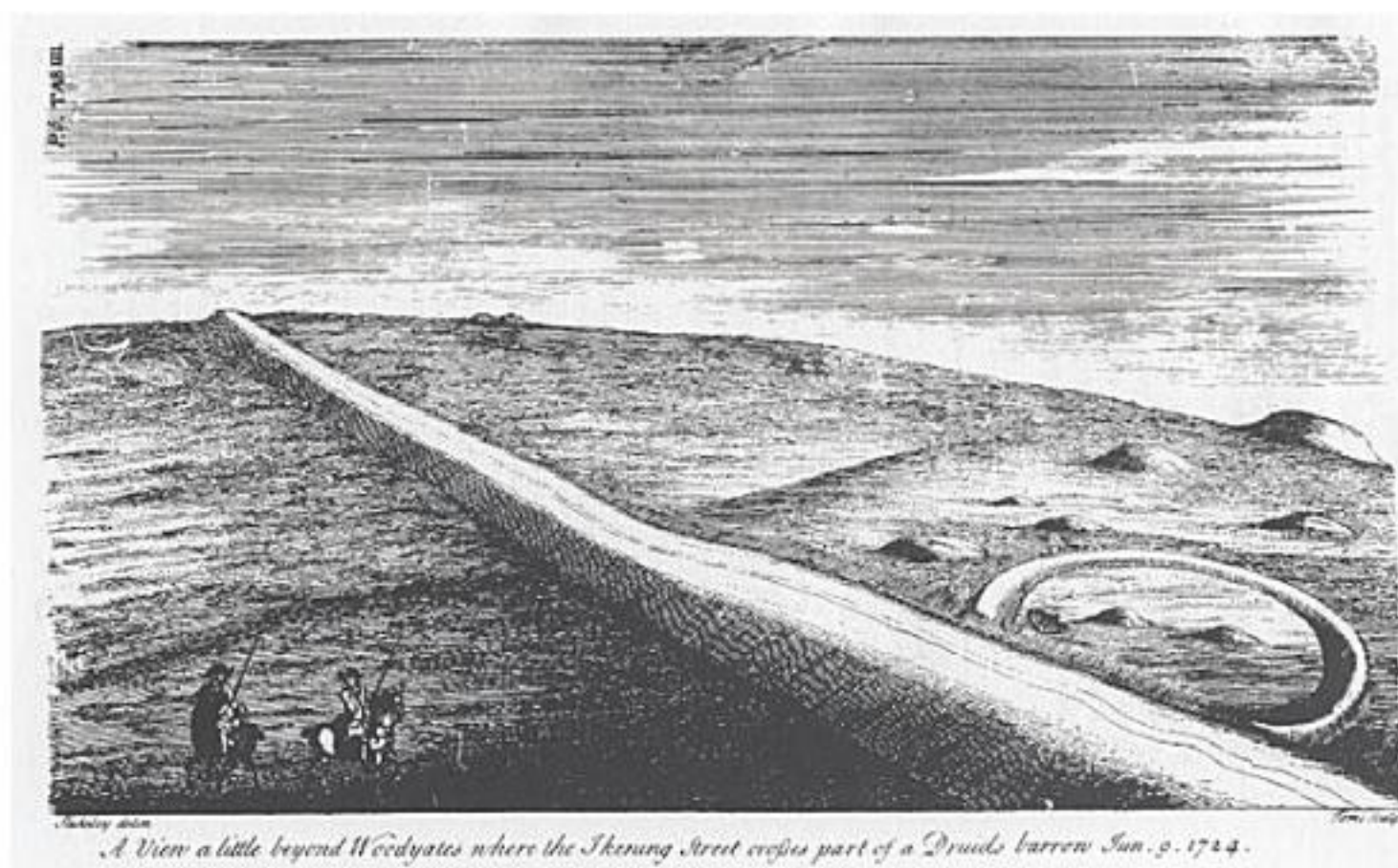


Plate 4. A View a little beyond Woodyates where the Ikening Street crosses part of a Druids barrow. Jun. 9, 1724.

Hence we gather, the measure of the shew-bread table of the Jews, a cubit and half in height, Exod. xxv. 23. It had a golden crown about it, meaning a moulding, or verge or cornish, as upon our tea-tables. π peripheria, corona, because 12 loaves were to be pil'd upon it. It was 31 inches in height, that of our ordinary eating-tables. And we shall find by this same cubit divided into its 6 tophach's or palms, all our Druid works are perform'd. 'Tis not to be wonder'd at, that it should come into Britain, with an eastern colony under the conduct of the Egyptian, Tyrian, Phœnician Hercules, (who was the same person) about Abraham's time, or soon after, as I have good reasons to believe, which will be shown in its proper place.



CHAPTER II.

OF the name of Stonehenge. These works prior to the Roman times. Who were the builders? Of the general situation of it, again. Of the beauty of its general proportion. A peep into it. A walk round the area. Remarks on two stones standing on the vallum, and two corresponding cavities for water vases: explained from ancient coins. That the Welsh are the remains of the Belgæ from the continent, who lived here at the Roman invasion, and by whose reports, Stonehenge was built by the most ancient oriental colony, that brought the Druids hither.

COME we to the name of Stonehenge, so called by our Saxon ancestors; an argument sufficient, they were not the builders of it; they would have called it by a more honourable name. Rode hengenne is in Saxon a hanging-rod or pole, i.e. a gallows; and Stonehenge is a stone gallows, called so from the hanging parts, architraves, or rather imposts, the more remarkable part; and which only can persuade people from thinking, the stones grew in the very place, (as they express it.) And so Mr. Camden, Dr. Holland, Mr. Webb and others think, of the wonderful work at Abury; because there are none of these overthwart stones, as here. Many are so astonished at the bulk of these stones, that measuring all art and power by their own, they had rather think, they sprouted up in their places, like mushrooms, at regular distances, in mathematical circles; than that they were plac'd there by human industry, for excellent purpose. But pendulous rocks are now called henges in Yorkshire, and I have been informed of another place there called Stonehenge, being natural rocks. So that I doubt not, Stonehenge in Saxon signifies the hanging stones. In Cornwall is a Heath call'd now Hengston down, probably from such a work as ours, now demolished. It is in the hundred of Easte. And near it, is that other memorable Antiquity, composed of many upright stones, call'd the Hurlers, a Druid temple. The old Britons or Welsh call Stonehenge choir gaur, which some interpret chorea gigantum, the giants dance: I judge, more rightly chorus magnus, the great choir, round church, or temple. As Banchor (where probably was of old, another Druid temple) means the high temple. But they mistake it for chorea, chwarae xware, a ball, dance; as Necham sings;



Nobilis est lapidum structura, chorea gigantum:
 Ars experta, suum posse, peregit opus,

Mr. Camden defines the work coronæ in modum. The Latin corona a crown, corolla a ghirland, and the British crown comes from its circular form, as cōr chorus. The armoric Britons call cryn rotundus, kruin the Irish. Coryn is the round tip of any thing, many such like words in all the Celtic dialects. The chorus of a building among Roman christians, became appropriate to the more sacred part, or east end of churches, always turn'd of a circular form; from the time of Constantine the Great. Thus all the churches in the holy land, thus the chapel in Colchester castle, and in the Tower of London, (both, in my opinion, built about his time) are round at the east end. The old Britons or Welsh, we find, had a notion of its being a sacred place, tho' they were not the builders of it; for I take them to be the remains of the Celtic people that came from the continent, who chiefly inhabited England, at least the south part, when the Romans invaded the island, they are more particularly the remains of the Belgæ. I suppose their name Welsh, a corruption of Belgæ, Ουέλγαι in greek, **Belgischen** and **Weltschen** in german. Strabo IV. speaks of their way of making flannel, called *λαινά* [λαῖνα, χλαῖνα] for which our Welsh are so famous. Strabo gives the celtic word without the guttural aspirate, chlæna in latin. The most ancient inhabitants, the remains of the old Phœnician colony and primitive Celts who built Stonehenge, were the Picts, Scots, Highland and Irish, all the same people, tho' perhaps differing somewhat in dialect, as in situation: no otherwise than a Cumberland-man and one of Somersetshire now. The Cornish, I suppose, some remains too, of the old oriental race. But at this very day in Wales, they call every antiquated appearance beyond memory, Irish. Upon view of land, that from before any ones remembrance appears to have been plow'd, or very ancient ruins of buildings, and the like, they immediately pronounce, That it was in the times of the Irish. The very same is observable in the north, of the Picts or Pights, as they pronounce it, gutturally, in the oriental fashion, which we cannot imitate. They call old foundations, Pights houses, &c. Every thing is Pictish, whose origin they do not know. These people are conscious, that they are not the Aborigines, who by time and successive inundations, were forc'd northward and westward, into Scotland and Ireland. And also in the days of the Romans, such of the then inhabitants, as would not submit to their gentile yoke, took the same road. The Irish therefore, or ancient Scottish, is the remnant of the Phœnician language, mixt with old Biscayan

and Gallic, dialects of Celts; and some oriental, Arabic in particular: as Mr. Toland observes. And they are the descendants of the people who built Stonehenge, and the like Works. Whence spring the strange reports of these stones, coming from Egypt, from Africa, from Spain, from Ireland. As retaining some memory of the steps, by which the people who preceded their ancestors, travelled; nor they themselves, nor even the Belgæ pretending to be the builders of this wonderful work. For the Belgæ could not be ignorant of their own coming from the Gallic continent.



The Front view of STONEHENGE.

Plate 5. The Front View of Stonehenge

I have taken notice of another remarkable particular, as to the name of Stonehenge; which I apprehend to be of highest antiquity: that it was called the Ambres, or Ambrose, as the famous main Ambre by Pensans in Cornwall, another work of the Druids akin to this. And from hence the adjacent town of Ambresbury had its name. But of this matter, I must beg the readers patience, till I come to the last chapter, and discourse of the antiquity of there works in general.

So much at present as to the name of our fabrick; it is time to draw toward the sacred pile, and fancy ourselves walking upon this delightful plain:

-----juvat arva videre

Non rastris hominum, non ulli obnoxia curæ. Virg.

nought can be sweeter than the air that moves o're this hard and dry, chalky soil. Every step you take upon the smooth carpet, (literally) your



nose is saluted with the most fragrant smell of serpillum, and apium, which with the short grass continually cropt by the flocks of sheep, composes the softest and most verdant turf, extremely easy to walk on, and which rises as with a spring, under ones feet. The following drawing is a prospect taken from TAB. III. the king's barrow, west from Vespasian's camp, in the way from Ambresbury to Stonehenge, by the Bristol road. Tho' the graver has not done it justice: yet it will give one a general notion of the situation of the place. It is admirably chosen, being in the midst of those wide downs, call'd Salisbury plain; between the river Avon to the east, and a brook that runs into the Willy, on the west. These two streams half round encompass it, at 2 miles distance, forming as it were a circular area, of 4 or 5 miles diameter, compos'd of gentle acclivities and declivities, open and airy. Yet agreeably diversify'd with the appearance of barrows, every where upon the edges of the highest grounds. Which very barrows are curious and entertaining, when view'd at hand, as well for the nicety and handsome turn of their forms, as for their great variety, and all within sight of the temple. These downs feed many flocks of sheep, and no doubt furnish'd the idea of Thessalian and Arcadian plains, to the noble Sydney residing at the neighbouring Wilton. The rivers are planted very thick with towns. Six miles south of Stonehenge is Salisbury, a mile nearer is Sorbiodunum, or old Sarum, by the side of which passes the Roman road via Iceniana reaching from Norfolk, into Dorsetshire. As this road goes southward, a mile beyond Woodyates, where it enters Dorsetshire and Cranburn chase, it passes over a heath where are many old barrows, like these on Salisbury plain. It happens there, to infringe upon one of the barrows, which luckily affords us a demonstration, of the road being made since those barrows; of which I took notice in my itinerarium p. 180. and further to gratify the curious have here inserted a print of it TAB. IV. and may take the opportunity once for all to advertize them, of the disadvantage under which all drawings from these plains must appear. They are made for use and instruction, like mathematical figures, and cannot be expected much to please the eye; being form'd chiefly from bare lines, admitting no picture-like decoration.

I have observ'd another similar proof of these works being older than the Roman times here, in that Roman road that goes from Marlborough to Bath. It is near Abury, and I have a print of it engrav'd, which will be exhibited, when I next publish an account of that great work. But in the former plate IV. I call those Druid barrows, which are often found on these plains: a circular trench, sometime of 100 foot diameter, with only a small

tump of earth in the middle, under which there is commonly an urn. Sometime two or three of these little tumps or diminutive tumuli within one circle, which it is natural to suppose, were friends or relations. These circles are always excellently well mark'd out.

The particular spot of ground where Stonehenge stands, is in the lordship of west or little Ambresbury: the possession of the reverend Mr. Hayward, who at present may be call'd the Archdruid of the island. 'Tis a delicate part of this large plain, with a gentle declivity from the south-west to the south and north-east. So that the soil, which is chalk, is perfectly dry and hard. Hence the infinite numbers of coaches and horses, that thro' so many centuries have been visiting the place every day, have not obliterated the track of the banks and ditches. The water cannot possibly rest any where hereabouts. The founders consulted well for the stability of their work, and salubrity of the place. Cæsar informs us in his commentaries, B. G. vi. 13. that among the Druids, "one has the supreme authority. When he is dead, whoever excels in dignity succeeds. But if there be more candidates, the Archdruid is chose by the votes of the Druids: and sometimes they fight for it. At a certain fix'd time of the year the Gaulish Druids meet, in the territories of the Carnutes, which country is in the middle of Gaul, in a consecrated place. Hither all persons from all quarters come, who have any controversy, and stand to their determination. The discipline of the Druids arose in Britain, and is said from thence to have been brought into Gaul. And now, they who design to be more thoroughly initiated therein, go over to learn." Here in few lines the great author acquaints us with a vast fund of ancient history, and upon which whole volumes have been wrote. I observe no more from it at present, than that we may very reasonably conclude, the elegant and the magnificent structure of Stonehenge was as the metropolitical church of the chief Druid of Britain. This was the locus consecratus where they met at some great festivals in the year, as well to perform the extraordinary sacrifices and religious rites, as to determine causes and civil matters. Cæsar calls these appointments of the Druids in Gaul consecrated places, where probably was nothing but a circle of rude stones. Had he seen those of our island, an Abury or even a Stonehenge, he would scarce have given them the title of temples: he was not used to the old patriarchal way. But I reckon the true reading in that passage quoted from him, to be loco consecrato, not luco, which was put in by some bold transcriber, who had heard of the fondness of the Druids for groves. But how unfit is a grove for a great and public meeting upon civil affairs? And this for the excellency of its situation upon a vast plain, was well calculated



for a public meeting of those of the order, at an election of a new Archdruid. As Cæsar's words give light to the work before us, so it confirms what the warlike author says, of the discipline being originally in Britain; which the critics upon the continent cannot bear, and vainly endeavour to spirit away Cæsar's meaning. The very building of Stonehenge, to say nothing of other like works here, shows it was not in vain, that the youth of Gaul came to learn of men, who could contrive and execute so mighty a work.

Stonehenge stands not upon the very summit of a hill, but pretty near it, and for more than three quarters of the circuit you ascend to it very gently from lower ground. At half a mile distance, the appearance of it is stately and awful, really august. As you advance nearer, especially up the avenue, which is to the north-east of it, (which side is now most perfect) the greatness of its contour fills the eye in an astonishing manner. TAB. V. is the front prospect from the entrance of the avenue. The stone that leans o'er the high altar appears thro' the grand or principal entrance: because we stand upon lower ground. If the reader pleases to cast his eye upon Plate XII. there 'tis represented in orthography, TAB. XII. (to speak technically) as here in prospect. Hence by this method of comparing the designs together, we may, without confusion, gather a true notion of the work. Stonehenge is a good deal more in diameter, than the outside of St. Paul's cupola. And from a comparison of these two buildings, I was able to judge of the vanity of the architect of St. Peter's at Rome, who in order to degrade the Pantheon, (whilst he was imitating it) boasted, he would set the Pantheon 200 foot high in the air, meaning the cupola there. But the architect of the Pantheon, Valerius Ostiensis (had he been alive) would have told him, that the vastness of the diameter in these cupola's is lost by the very height. Whatever we would have admired, ought to be preserved as the largest dimension. Therefore Valerius, with admirable judgment, has made the outward breadth of the Pantheon one fifth part compleatly longer than its height, taken in front; but if we measure it sidewise, taking in the portico, the breadth to the height, is more than 6 to 4. By this means the wonder of the Pantheon, the curve or arch 150 Roman feet in diameter, remains. So the curve of Stonehenge, which is above 100 English feet, appears extraordinary large and well proportion'd, upon a height of 18 foot, which reaches to the top of the outer cornish; that of the inner cornishes is but 24 foot high, at a medium. For the cornishes of the inner part of Stonehenge, or that which Webb calls the cell, are not all of equal height, of which in proper place. Thus both parts of the wonder is pre-

serv'd, the greatness of the circuit of the whole work, the greatness and height of the parts that compose it; the height being one fourth of the diameter. The greatness too of the lights and shades in Stonehenge, as well as their variety arising from a circular form, gives it all possible advantage, and makes it deserve the appellation of;

Pro. TAB. VI.

English Feet	Cubits	English Feet	Cubits	English Feet	Cubits	English Feet	Cubits
1		1		10		100	
2		2		20		200	
3		3		30		300	
4		4		40		400	
5		5		50		500	
6		6		60		600	
7		7		70		700	
8		8		80		800	
9		9		90		900	
10		10		100		1000	
11		11		110		1100	
12		12		120		1200	
13		13		130		1300	
14		14		140		1400	
15		15		150		1500	
16		16		160		1600	
17		17		170		1700	
18		18		180		1800	
19		19		190		1900	
20		20		200		2000	
21		21		210		2100	
22		22		220		2200	
23		23		230		2300	
24		24		240		2400	
25		25		250		2500	
26		26		260		2600	
27		27		270		2700	
28		28		280		2800	
29		29		290		2900	
30		30		300		3000	
31		31		310		3100	
32		32		320		3200	
33		33		330		3300	
34		34		340		3400	
35		35		350		3500	
36		36		360		3600	
37		37		370		3700	
38		38		380		3800	
39		39		390		3900	
40		40		400		4000	
41		41		410		4100	
42		42		420		4200	
43		43		430		4300	
44		44		440		4400	
45		45		450		4500	
46		46		460		4600	
47		47		470		4700	
48		48		480		4800	
49		49		490		4900	
50		50		500		5000	
51		51		510		5100	
52		52		520		5200	
53		53		530		5300	
54		54		540		5400	
55		55		550		5500	
56		56		560		5600	
57		57		570		5700	
58		58		580		5800	
59		59		590		5900	
60		60		600		6000	
61		61		610		6100	
62		62		620		6200	
63		63		630		6300	
64		64		640		6400	
65		65		650		6500	
66		66		660		6600	
67		67		670		6700	
68		68		680		6800	
69		69		690		6900	
70		70		700		7000	
71		71		710		7100	
72		72		720		7200	
73		73		730		7300	
74		74		740		7400	
75		75		750		7500	
76		76		760		7600	
77		77		770		7700	
78		78		780		7800	
79		79		790		7900	
80		80		800		8000	
81		81		810		8100	
82		82		820		8200	
83		83		830		8300	
84		84		840		8400	
85		85		850		8500	
86		86		860		8600	
87		87		870		8700	
88		88		880		8800	
89		89		890		8900	
90		90		900		9000	
91		91		910		9100	
92		92		920		9200	
93		93		930		9300	
94		94		940		9400	
95		95		950		9500	
96		96		960		9600	
97		97		970		9700	
98		98		980		9800	
99		99		990		9900	
100		100		1000		10000	

Chart converting English feet to Cubits

Deorum gloriosa domus,

as Theocritus and Herodotus generally call temples. And its situation is correspondent to the antient notion. Pausanias praises the Tanagrei in Beotia, for having their temples in clean and distinct area's, distant from profane buildings and traffic.

Stonehenge is inclosed within a circular ditch. After one has pass'd this ditch, says the right reverend annotator to Camden, he ascends 35 yards before he comes at the work itself. This measure is the same, as that which Webb calls 110 foot, the diameter of the work. For the area inclos'd by a ditch, wherein Stonehenge is situate, is in diameter three times the



diameter of Stonehenge. See the Plate of the area. XXIII. Therefore the distance between the verge of the ditch within side, quite round, to the work of the Temple, is equal to the diameter of the Temple. The reader remembers what I promis'd, about the scale or measure whereby this work and all others of the Druids, is form'd; that 'tis the old Hebrew, Phœnician or Egyptian Cubit, which compar'd with the English foot, amounts to 20 inches and $\frac{4}{5}$. Therefore I have drawn the ensuing comparison and proportion, between our English and Hebrew Scale; which is to accompany us in the future description. TAB. VI. the scale of cubits and feet compar'd. That I might not be suspected to savour an hypothesis, I produce other peoples measures, where I can find them in print, provided they be done with tolerable judgment and accuracy; for both are necessary in our case, with proper allowance. 'Tis not to be suppos'd, that in this work, the minuteness and extreme curiosity of Desgodetz, with which he measur'd the remains of old Rome, is expected, or even possible. For tho' the stones are not chizel'd and squar'd, to such preciseness, as Roman works are; yet they are chizel'd, and are far from rude. Nevertheless every body has not skill, properly to measure them. For they are much impair'd by weather: much is knock'd off by wretched hands. Those stones that stand, are luxated various ways, by time and their own weight; by silly people digging about them, and by the unfortunate colony of rabbets lately translated thither. So that we may well say with Claudian,

Seram ponderibus pronis tractura ruinam,
 Pars cadit affiduo flatu, pars imbre peresa
 Rumpitur, abripuit partem vitiosa vetustas.

I was forc'd to make many admeasurements and repeated, before I could obtain an exact ground-plot; and it requir'd much consideration to do it, and to find out the true scale by which it was compos'd, the Druid cubit, which they brought with them from the east. Therefore by the annexed scales, TAB. VI. which I have contriv'd to answer all lengths, the reader. will most perfectly understand the subsequent description, and see the truth of my assertion: and may from thence be enabled to measure any other like works, in our islands, which I have not had the opportunity of viewing. It was the eastern way, in laying out a building, to use a staff of 6 cubits long. This was of a convenient, manageable length; and its divisions being half a dozen, suited well a reckoning by duodenaries. Thus in Ezek. xl. 3, S. Apoc. xxi. 16. the angel that laid out the temple of Solomon, is described, as having a reed of 6 cubits (a measuring reed or cane) in his hand. This being

the universal and first measure of antiquity, was in time spread all over the world. In particular, it became the decempedum of the Greeks and Romans; the common measuring standard. But 'tis remarkable, they alter'd the divisions, thinking it more artful and convenient to have them in less parts: and instead of 6 cubits, they made it consist of 10 feet. And by time and change, the whole measure became somewhat alter'd from the primitive. For the Greek decempedum was swell'd somewhat too long, as the Romans diminish'd theirs a little. Ezekiel's reed is our 10 foot and 4 inches $\frac{2}{3}$; 400 cubits is the stadium of the ancients, or furlong, 100 feet.

When you enter the building, whether on foot or horseback and cast your eyes around, upon the yawning ruins, you are struck into an exstatic reverie, which none can describe, and they only can be sensible of, that feel it. Other buildings fall by piece meal, but here a single stone is a ruin, and lies like the haughty carcase of Goliath. Yet there is as much of it undemolished, as enables us sufficiently to recover its form, when it was in its most perfect state. There is enough of every part to preserve the idea of the whole. The next Plate, TAB. VII. the peep (as I call it) into the sanctum sanctorum, is drawn, at the very entrance, and as a view into the inside. When we advance further, the dark part of the ponderous imposts over our heads, the chasm of sky between the jambs of the cell, the odd construction of the whole, and the greatness of every part, surprizes. We may well cry out in the poet's words

Tantum Relligio potuit!

if you look upon the perfect part, you fancy intire quarries mounted up into the air: if upon the rude havock below, you see as it were the bowels of a mountain turn'd inside outwards. It is pleasant likewise to consider the spot upon which 'tis situate, and to take a circular view of the country around it. For which purpose I have sketch'd the following prospects, taking in the country almost round the circumference of the horizon. This Use there will be in them further; is ever it happen, that this noble work should be destroy'd: the spot of it may be found, by these views.

TAB. VIII. north prospect from Stonehenge.

TAB. IX. south-west prospect from Stonehenge.

TAB. X. south-east prospect from Stonehenge.

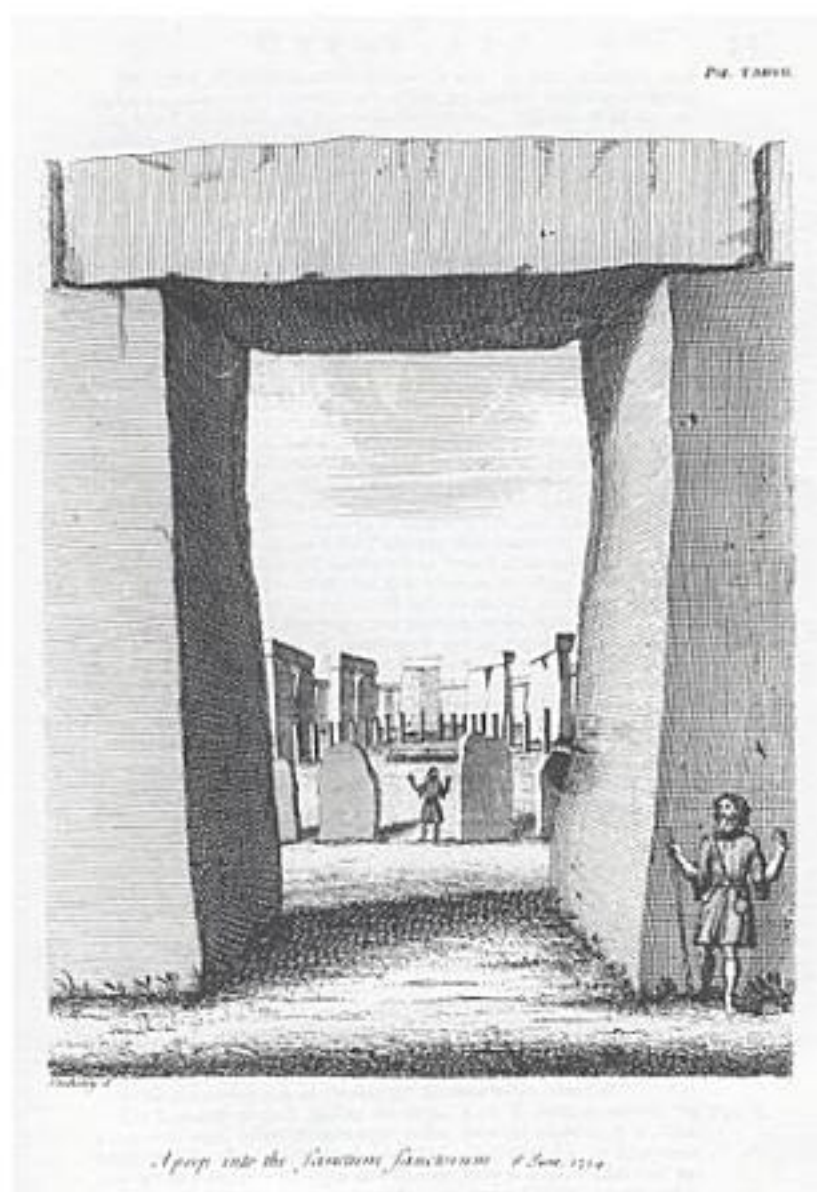


Plate 7. A peep into the Sanctum Sanctorum

The vallum of the ditch which incloses the area, or court, is inwards, and makes a circular terras; walking upon which, we take the foregoing prospects. The lowest part of the area is towards the entrance. The tops of all the circumjacent hills, or rather easy elevations, are cover'd o're, as it were, with barrows, which cause an agreeable appearance; adorning the bare downs with their figures. And this ring of barrows reaches no further, than till you lose sight of the temple, or thereabouts. Stand at the grand entrance by the stone that lies upon the ground, and the view of the temple presents itself as in the Vth Plate, the front prospect of Stonehenge. Directly down the avenue, to the north-east, the apex of an hill terminates the horizon, between which and the bottom of a valley you see the Cursus, a work which has never yet been taken notice of. Being a space of ground included between two long banks going parallel east and west, at 350 foot distance, the length 10000 feet. This was design'd for the horse races and games, like the Olympic, the Isthmian, &c. of the Greeks. But we shall speak

more particularly of this afterwards. In the valley on this side of it, the strait part of the avenue terminates in two branches; that on the left hand, leads to the Cursus; that on the right goes directly up the hill, between two famous groups of barrows, each consisting of seven in number. The farthest, or those northward, I call the oldest king's barrows; the hithermost are vulgarly called the seven king's graves.

If we walk a little to the left hand, TAB. VIII. is presented. See the northern long barrow: on this side of which, the eye takes in the whole length of the Cursus. Many barrows at the end and on both sides of it. That mark'd P. was open'd by my Lord Pembroke, those mark'd S. were open'd by myself. What was discover'd therein will be treated of hereafter. Further to the west, the highest ground of that spot whereon Stonehenge stands, eclipses a distant view, and there are the nearest barrows planted with rabbits, which do much damage too at Stonehenge, and threaten no less than the ruin of the whole. Upon the vallum of Stonehenge is one of the stones there, which seems to be a small altar, for some kind of libations, and at the letter A. the mark of a cavity; of which more particularly, in the next page. The next or south-west prospect, TAB. IX. from Stonehenge, takes in the country from Berwickbarn, and my Lord Pembroke's wood of Groveley, to Salisbury steeple: a chain of barrows reaching a 6th part of the whole horizon. Many from the great quantity of these sepulchral tumuli here, injudiciously conclude, that there have been great battels upon the plain, and that the slain were bury'd there. But they are really no other than family burying-places, set near this temple, for the same reason as we bury in church-yards yards and consecrated ground. Salisbury steeple seen from hence, brings to my sorrowful remembrance, the great Thomas Earl of Pembroke, whose noble ashes are there deposited. He was patron of my studies, particularly those relating to Stonehenge. Virtue, piety, magnanimity, learning, generosity, all sublime qualities recommended and added to his illustrious descent. Glorious it will be for me, if these pages live to testify to another age, the intimacy he was pleased to honour me with.

-----quis talia fando

Temperet a lachrymis-----!

In this Plate, the reader may remark another of the cavities within the vallum, to which that corresponds on the opposite diameter before hinted at.



The south-east prospect finishes the circle, TAB. X. looking towards the valley southward, where the rain-water passes, from the whole work of Stonehenge, the whole tract of the Cursus and the country beyond it, as far as north long barrow; and so is convey'd into the river Avon at Lake. That road between king barrow and the seven barrows is the way to Vespasian's camp and so to Ambresbury. The barrow under those seven kings of later form, is that nearest to Stonehenge.

Doubtless in the sacrifices and ceremonies which were here practis'd, water was us'd, and I observe most of our Druid temples are set near rivers. The reason why Stonehenge was not set near a river, has hitherto effectually preserv'd it, this part being uninhabitable upon that account, and rather too far off a town for tillage. But when I curiously contemplated the beauty and convenience of this court, I observ'd two remarkable places, which plainly have a conformity with the two stones set upon the vallum; which stones puzzle all enquirers. Those particulars seem to explain one another, and more especially by the help of a coin in Vaillant, tom. II. p. 240. for which reason I caus'd it to be engraven on that plate, TAB. XXIII. the area of Stonehenge. 'Tis a coin of Philip the Roman emperor, struck by the city of Heliopolis in Cœlesyria under mount Libanus, now call'd Baldec, where is an admirable ancient temple remaining, describ'd and pictur'd in Maundrel's travels of the holy land. In the walls of it are two or three stones of an immense length, which seem to be the fragments of an obelisk, dedicated to the sun, whence the name of Heliopolis. The coin presents a temple built upon a rock: to which they ascend by steps. The temple is inclos'd in an area with a wall. On the left hand by the circuit of the area is a stone altar. A little further, is a great vase for water to be us'd in the sacrifices. The legend is COLonia IVLia AVGusta FELix HELiopolitana. Now the two cavities in the circuit of our area, very probably were the places where two great stone vases were set, and the two stones were two altars for some particular rites, which we don't take upon ourselves to explain. See another coin II. in Descamp's *selectiora numismata*, p. 23. which is to the same purpose. Those stones are set in their proper places in my scheme of the area of Stonehenge: and I leave them to the better conjectures of the learned in these matters. Mr. Webb fancies them the jambs of two portals of two entrances, besides the great entrance; and makes them favour his imaginary triangles, from which he forms the work of Stonehenge, upon a Vitruvian plan. And in order to bring this about, he draws one stone, that toward the east, or on the left hand, from the true and only entrance, no less than 120 foot out of its real place. No doubt, the



reader will be surpriz'd at this, and the easier credit me, when I say his ground-plot in other parts, is very far from being exact. The reader will observe from my scheme, that the two semicircular hollows mark'd A A, wherein I suppose the water-vases were set, are plac'd alternatively, with the two stones: I don't pretend to show why the Druids did so. But that stone standing, together with the upper A, and the center of the grand entrance by the stone that lies flat there, make an exact equilateral triangle; yet really have not the lean relation to the scheme of the work of Stonehenge in general, or to the cell in particular. Nor do the stones, or those hollows, point out any other entrance cross the ditch into the area. So in the tabernacle of Moses and temple of Solomon, great vases in brass were set for water, in the court before the temple.



CHAPTER III.

THE admeasurement of the ground-plot; and outer circle of the temple, and imposts over it. Of the principal line of the work, running down the avenue, and single entrance, into the area, or court. The imposts are jointed exquisitely by mortaise and tenon. The temple at Persepolis a building of this sort.

LET us now set about an examination of the measures of the temple itself. Take a staff 10 foot 4 inches and $\frac{3}{4}$ long. Divide it into six equal parts. These are the cubits of the ancients. Each cubit is divided into six parts. These are palms. Thus have we the original measure of the founders of Stonehenge. We will take Mr. Webb's measures, and compare 'em herewith. TAB. XI. the ground-plot.

Mr. Webb says, p. 55. that the whole work of Stonehenge being of a circular form, is 110 foot in diameter. But to be precise, 'tis 108 and somewhat more, and his own scale in his ground-plot shows the same. This is the diameter from outside to outside, which in our ground-plot is the principal diameter. The thickness of the stones of the outward circle, he says, p. 59. are 3 foot and an half. Hence the inner diameter becomes almost 102 feet English. If the reader pleases to measure 102 feet upon the comparative scales, which I gave of the English foot and Hebrew cubit, being the measure us'd by the Druids, or in the scales at the bottom of the ground-plot, he will find that it amounts exactly to 60 cubits. 30 cubits being the radius wherewith they struck the circle upon the turf, which is the inner circumference of that work. That sufficiently defin'd their ground-plot. For tho' they intended in general, that the thickness of the stones of this outer circle should be 3 foot and a half; but to speak more properly, 2 cubits (which is the same measure) yet they were more careful of one side only, of that dimension. And the chief business being withinside this temple, they set the best face of the stones inwards, upon that ground-line; the other face was suited as well as the scantlings they could get, best answer'd. Webb's 3 foot and a half is precisely 3 foot 5 inches, and somewhat more, making compleatly 2 Druid cubits, as you find by the scales. They that carefully view Stonehenge, will easily see, that the stones

of the inside both of the outward circle and of the cell, are the smoothest, best wrought, and have the handsomest appearance. For so the polite architects of the eastern part of the world, bestow'd more elegance within their temples than without. Not as our modern London builders, who carve every moulding, and crowd every ornament, which they borrow out of books, on the outside of our publick structures, that they may more commodiously gather the dust and smoke. The truth is, good sense and observation of nature, produces the same ideas in all ages and all nations. Our Druids observ'd, that God almighty in forming the body of a man, made all the external parts great, bold, round, with ornament sufficient; but where the beauty chiefly consisted in the fitness of the proportions, in symmetry and plainness. In the inside, he has display'd all the minutiae of divine skill. They have done the like, according to their way, in Stonehenge. So even as to the outward appearance, I find they took care to set those stones that had the best outward face, toward the front or entrance. And to embarrass the general scheme of the work, they made use of two centers instead of one, but 2 cubits distance from one another; perhaps to make the thing intricate and as magical: besides the advantage it gives to the oval form of the included cell.

Observe, in laying down the ground-plot and projecting this outer circle, we said it was 110 feet, (gross measure) in diameter. We remember what is before-mention'd, that the learned Greaves measur'd two galleries in the greater pyramid, in like manner, each 110 feet. So the bishop of London says, from the grand entrance of Stonehenge, to the work is 35 yards: so he says the diameter of the circle at Rowldrich in Oxfordshire, is 35 yards: all this while 60 Druid or Egyptian cubits are meant. So the length of Solomon's temple was 60 cubits, whereof the *Ædes* 40 cubits, the *sanctum sanctorum* 20.

The intention of the founders of Stonehenge was this. The whole circle was to consist of 30 stones, each stone was to be 4 cubits broad, each interval 2 cubits. 30 times 4 cubits is twice 60: 30 times 2 cubits is 60. So that thrice 60 cubits compleats a circle whose diameter is 60. A stone being 4 cubits broad, and 2 cubits thick is double the interval, which is a square of 2 cubits. Change the places between the stones and their intervals, and it will make a good ground-plot for a circular portico of Greek or Roman work. For supposing these intervals to be square plinths of 2 cubits each side, and columns properly set upon them: it will admit of 3 diameters for the intercolumniation, which is the *diastyle* manner in architecture. But to talk



of pycnostyle with Mr. Webb, and call these stones of ours pillars or pillasters, where they are twice as broad as the space between them, and to call this an order, is monstrous.

Thus a stone and an interval in this outward circle of Stonehenge, makes 3 squares; 2 allotted to the stone, 1 to the interval; which for stability and beauty withal, in such a work as ours, is a good proportion. The curiosity of the work, and the general orthography of the outward circle, I have design'd in Plate XII. and it may be seen in the seven stones now remaining at the grand entrance. Which show what strictly was the intent of the founders, and where they took the liberty to relax of that strictness, and that with judgment; so as to produce a good effect. I shall explain it from Mr. Webb's own measures, that I may give the truth its full advantage. P. 59. he says, the stones which made the outward circle are 7 foot in breadth. Observe that 7 foot makes 4. cubits of the Druids. He says, they are 15 foot and a half high. You find that exactly 9 cubits. P. 61. he says, the architraves lying round about upon them, are 2 foot and a half high, i.e. our cubit and half. He mentions their breadth to be 3 foot and half; equal to the thickness of the upright, i.e. our two cubits. They are jointed in the middle of each perpendicular stone. Hence tho' he has not mention'd the length of these architraves, we gather them to be 6 cubits long. This is spoke of their inward length, for outwardly they must needs be somewhat longer, as being an ark of a larger circle. I must observe about these architraves, as Mr. Webb calls them, that they are more properly call'd imposts or cornishes; for they are not made to support any thing above them, as is the nature of an architrave, but for the stability and ornament of what supports them, which is the nature of imposts and cornishes. Tho' these bodies of stone here, never had or were intended to have, any mouldings upon them, like Greek and Roman works; they are wrought perfectly plain, and suitable to the stones that support them. I observe further, the chizeling of our upright stones, is only above ground. For the 4 or 5 foot in length below ground, is left in the original natural form. And that the upright stones are made very judiciously to diminish a little, every way; so that at top they are but 3 cubits and a half broad, and so much narrower as to suffer their imposts, to hang over a little, or project (in properer terms) over the heads of the uprights, both within side and without. By this means these uprights are in much less danger of falling or swerving any way: and the imposts, which are not broader than the thickness of the stones at bottom, which support them, have a graceful effect, by projecting a little, without danger of surcharging them. We see

here plain, natural, easy geometry, what we may call the first rudiment of art, deduc'd from common reason: but they that can find any Roman delicacy herein, must, I freely own, have a much nicer eye and talk, than I can pretend to. The Druids had, from patriarchal times, made their altars or temples of rude unpolish'd stones. But now hearing, probably from Phœnician traders, of the glories of Solomon's temple, at least of other temples made artfully in imitation of it; such as those of Sesostris in Egypt, and others about Phœnicia: they thus made a small approach to square scantlings and stones wrought. And this seems to have been the first and the last work of theirs of this kind, that I can hear of, either in the Britanic isles, or on the continent. And no doubt but it must give them so high a reputation, that even the people of Gaul themselves could not help owing to Cæsar, that the discipline of these men was first begun here, and carry'd on with such success, that they sent their youth from the continent hither, as to an academy, to be initiated in their learning. We are not to suppose these words are to be strictly taken, as if the Druids here began their institution: but that being an oriental manner of religion, and much different from that on the Gallic continent, what they had of it there, was deriv'd from Britain. It appear'd as much new to them, who were chiefly idolaters, as in many ages preceding, Abraham's religion appear'd new to the inhabitants of Phœnicia and Egypt: who were then not much tinctur'd with idolatry. Nor, probably, had the Druids much opportunity of building another such work, as Stonehenge, between its foundation and the Roman times. Because, I apprehend, the encroachments of the Gallic nations from the continent, seating themselves in Britain, about 200 years before Cæsar's invasion, had molested the Druids much, in these southern counties: and drove them with the old Britons, farther northward and westward. But of this we will treat more particularly afterwards, when we offer our opinion, of the time when it was made.

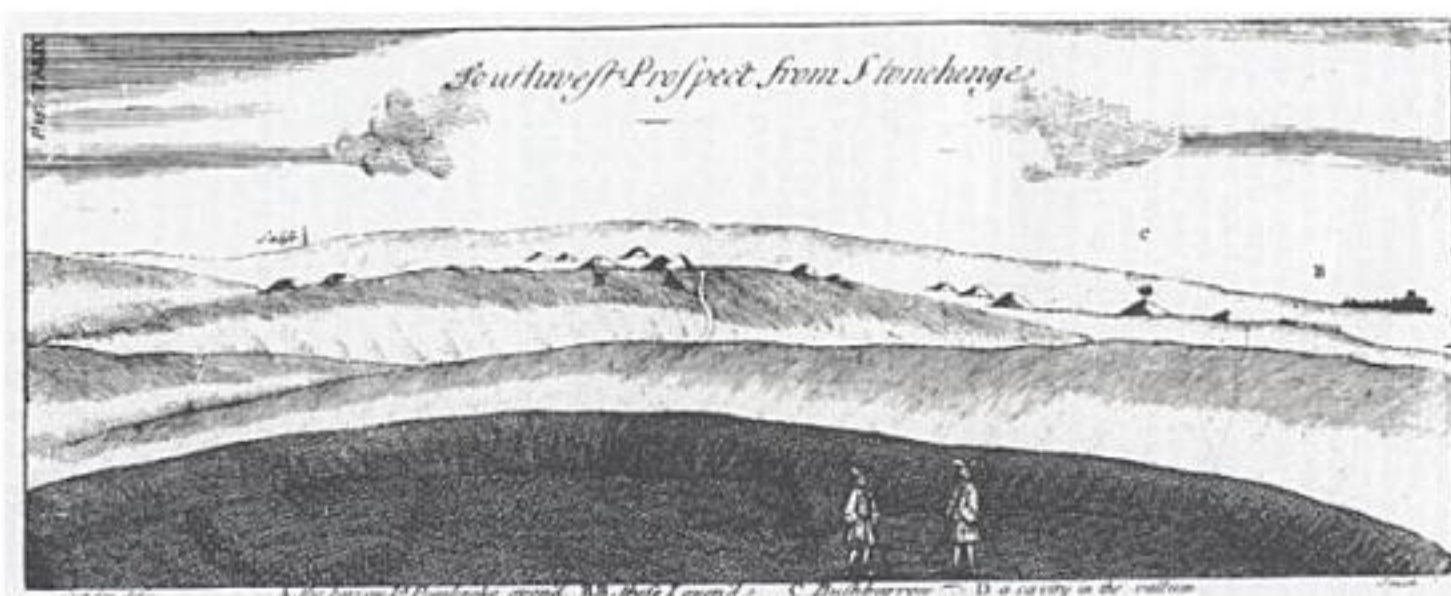


Plate 9. Southwest Prospect from Stonehenge

A. The barrow Ld. Pembroke open'd. BB. those I open'd. C. Bushbarrow. D. a cavity in the vallum.

In the orthographic plate, TAB. XII. we may see the strict geometry of the work of this outward circle, and the artful variation therefrom, in order to make the aperture of the grand entrance somewhat wider than the rest. Mr. Webb does not take notice of this particular; and he might have triumph'd in it. For 'tis no less than a Vitruvian rule, to relax the intercolumniation just in the middle of the portico, in the front of a temple, and over-against the door. He speaks of it in Lib. III. 2. when talking of the Eustyle ratio, the best for use, appearance and strength: he directs the intercolumniation to be of two diameters and $\frac{1}{4}$; but the middle intercolumniation of three diameters. By which means the approach to the door will be much more commodious, and nothing diminish'd of beauty in aspect. And this is the reality of the case before us.

But alas, our British priests knew nothing of Vitruvius; they deduc'd this knack from an authority much ancients than him, viz. from pure natural reason, and good sense. Nor does this hurt the whole of the work. The aperture ought strictly to have been two cubits equal to the rest, but they advanc'd it to two cubits and a half. This only crowds the next intervals on each side a small matter nearer, the rest preserving their true distance quite round. And in the work itself, 'tis obvious enough to the naked eye. Again, there is another remarkable particular observ'd by our priests. Because the aperture of the principal entrance we are speaking of, is wider than the rest: they have made the impost over it thicker than the rest, and 'tis equally obvious to the naked eye. This was the more effectually to

secure it from breaking. But this additional thickness they have put below. They were sensible it would have produc'd an ill effect at top, by breaking the line of that noble cincture. It must be own'd this was extremely well adjusted. And the breadth of the stone that hangs over head in this place is astonishing. See Plate VII. call'd a peep into the sanctum sanctorum. I had the greatest pleasure imaginable, in the year 1723, July, in being here for several days together, with the learned Heneage Lord Winchelsea. I have just reason to boast of that intimacy he indulg'd me in; and his memory must for ever be dear to me, for his noble qualities. My Lord and I were very careful in taking the measures of Stonehenge; and with great grief we observ'd, the stones here represented in that Plate, and TAB. V. the front view, to be much deviated forwards from their true perpendicular, and in the utmost danger of falling. 'Tis to be fear'd some indiscreet people have been digging about the great entrance, with ridiculous hopes of finding treasure, and loosen'd thereby the chalky foundation. We found by measure, that the upper edge of the impost overhangs no less than 2 foot 7 inches, which is very considerable in a height of 18. The whole breadth at the foundation is but 3 foot and a half. And this noble front is now chiefly kept up by the masonry of the mortaise and tenon of the imposts.

Thro' the middle of the principal entrance, runs the principal line of the whole work; the diameter from north-east to south-west. This line cuts the middle of the altar, length of the cell, the entrance, the entrance into the court, and so runs down the middle of the avenue, to the bottom of the valley for almost 2000 feet together. This is very apparent to any one at first sight, and determines this for the only principal entrance of the temple. All the other intervals of the stones of the outer circle, have no preheminance in any respect. There is no such thing as three entrances, which Mr. Webb's scheme suggests. He might as well have pretended there are 6, for so many points of his triangles meet in intervals, at the verge of the outer circle. Upon this line are all the principal centers that compose the work, it varies a small matter from true north-east.

The contrivance of our artificers in making mortaises and tenons, between the upright stones and the imposts is admirable, but so contrary to any practice of the Romans, that it alone is enough to disqualify their claim to the work. Much judgment and good sense is shewn in the management of them. The centers of the tenons are 2 cubits distant from each other, upon each upright. By this means there is 4 cubits distance from the center of the tenon of one stone, to the center of the tenon of its next neighbour,



across the intervals, or in one impost. Divide the upper face of an upright into its 2 squares, the center of a tenon is in the center of that square. Divide the under face of an impost, into its 3 squares, the correspondent mortaises are in the centers of the two outermost squares, and this was the strict geometrical method us'd by the founders: so that the stones fitted, as soon as plac'd in their true situations. These tenons and mortaises of this outer circle are round, and fit one another very aptly. The tenons and mortaises, are to inches and a half in diameter, which is 3 palms, or half a cubit. They rather resemble half an egg, than an hemisphere. These most effectually keep both uprights and imposts from luxation, and they must have used great labour that threw them down. Sir Robert Sibbald speaks of a rocking stone in Ireland, contriv'd with mortaise and tenon like ours: of which Mr. Toland gives us an account, with other like, the works of the Druids.

The whole height of upright and impost is 10 cubits and a half. The uprights 9 cubits, the impost 1 cubit and a half, so that the impost is a 6th part of the height of the upright. If we measure on the outside, the collective breadth of two upright stones, and the interval between them, 'tis 10 cubits and a half equal to the whole height; and the interval is half the breadth of a stone, the thickness of a stone is half its breadth. That impost which lies over the grand entrance, we said, was deeper and longer than the rest. Abraham Sturges an architect, and myself measured it, in presence of Lord Winchelsea. Its middle length is 11 feet 10 inches, which is 6 cubits 4 palms; 2 foot 11 inches high, which is 1 cubit 4 palms. They have likewise added a little to its breadth, more than the rest, being 3 foot 9 inches, which is 2 cubits and a palm. N. B. The scale of my drawing is adapted for the inside of the circle, upon which the proportions in geometry are built: so that the outward breadths of the uprights and lengths of the imposts are somewhat more, than by the scale appears there. The intelligent reader knows this must be the consequence, in arks of a larger circle.

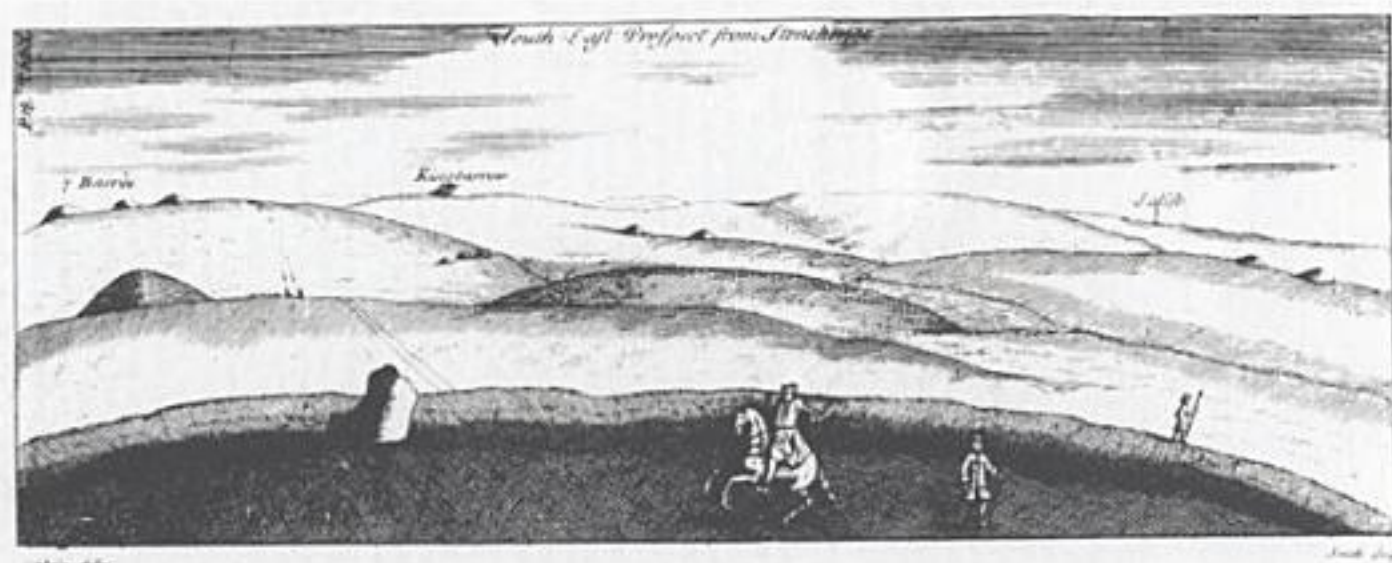


Plate 10. South-East Prospect from Stonehenge

Nothing in nature could be of a more simple idea than this vast circle of stones, and its crown-work or corona at top; and yet its effect is truly majestic and venerable, which is the main requisite in sacred structures. A single stone is a thing worthy of admiration, but the boldness and great relievo of the whole compages, can only be rightly apprehended, from view of the original. On the outside, the imposts are rounded a little to humour the curvity of the circle, and within they are strait, tho' they ought to be a little curv'd. This makes them somewhat broader in the middle, than at the end, and broader than the 2 cubits, which is the thickness of the upright stones, upon an ichnography. So that within, the crown-work makes a polygon of 30 sides. But this little artifice without debating the beauty of the work in the least, adds much strength to the whole, and to the imposts in particular. We may guess their proportions are well chose, when so many of them are thrown down by violence, and not broke in the fall. And their greater breadth in the middle, or that part that covers the intervals, adds to the solemnity of the place, by the shadow they present at the bottom. The whole affair of jointing in this building is very curious, and seems to be the oldest and only specimen of this kind of work in the world. There is nothing, that I know of, comes in competition with it, but the celebrated ruins at Persepolis. TAB. XXXV. It is compos'd of great stones laid across one another, as Stonehenge: but not with mortaise and tenon. The vulgar and learned too, generally take it for the remains of the palace of the Persian monarchs, burnt by Alexander the great; but it is really an open temple like ours, and made much in the same manner. But the stones



are well squar'd, ornamented with mouldings and carvings, and the whole of them are squares, not round works as here. Persepolis is a mixture, between the ancient patriarchal round form of open temples, and the square form introduc'd under the Jewish dispensation, in opposition to the former, which were generally degenerated into idolatrous purposes. But of this I shall speak more perhaps hereafter, when I treat of the most ancient temples.

Of the outer circle at Stonehenge which in its perfection consisted of 60 stones, 30 uprights and 30 imposts, there are more than half the uprights, viz. 17 left standing. 11 of these uprights remain, continuous, by the grand entrance, five imposts upon them. One upright at the back of the temple or on the south-west, leans upon a stone of the inner circle. There are six more lying upon the ground, whole or in pieces. So that 24 out of 30 are still visible at the place. There is but one impost more in its proper place. And but two lying upon the ground, so that 22 are carried off. Hence I infer, this temple was not defac'd when christianity prevailed. But some rude and sacrilegious hands carried the stones away for other uses. However it cannot but be the highest pleasure imaginable to a regular mind, to walk round and contemplate the stately ruins which I have endeavour'd to preserve in the outside views, such as TAB. XIII. from the south-west, and so of the rest. But we may say with Lucan,

Jam magis atque magis præceps agit omnia fatum.



CHAPTER IV.

OF the lesser circle of stones, without imposts. A disputation again Mr. Webb.

MANY drawings have been made and publish'd, of Stonehenge. But they are not done in a scientific way, so as may prove any point, or improve our understanding in the work. I have therefore drawn four architectonic orthographies: one, TAB. XII. is of the front and outside: three are different sections upon the two principal diameters of the work. These will for ever preserve the memory of the thing, when the ruins even of these ruins are perish'd; because from them and the ground-plot, at any time, an exact model may be made. TAB. XIV, XV, XVI. these orthographies show the primary intent of the founders; they are the designs, which the Druids made, before they put the work in execution. And by comparing them with the drawings correspondent, of the ruins, we gain a just idea of the place, when it was in its perfection. But now as we are going to enter into the building, it will be proper again to survey the ground-plot, pl11 which is so different from that publish'd by Mr. Webb. Instead of an imaginary hexagon, we see a most noble and beautiful ellipsis, which composes the cell, as he names it, I think *adytum* a proper word. There is nothing like it, to my knowledge, in all antiquity; and 'tis an original invention of our Druids, an ingenious contrivance to relax the inner and more sacred part, where they perform'd their religious offices. The two outward circles do not hinder the sight, but add much to the solemnity of the place and the duties, by the crebrity and variety of their intervals. They that were within, when it was in perfection, would see a most notable effect produc'd by this elliptical figure, included in a circular corona, having a large hemisphere of the heavens for its covering.

Somewhat more than 8 feet inward, from the inside of this exterior circle, is another circle of much lesser stones. In the measure of the Druids 'tis five cubits. This circle was made by a radius of 24 cubits, drawn from the common centers of the work. This struck in the chalk the line of the circumference wherein they set these stones. The stones that compute it are 40 in number, forming with the outward circle (as it were) a circular portico: a most beautiful walk, and of a pretty effect. Somewhat of the



beauty of it may be seen in Plate XVII. where, at present, 'tis most perfect. We are impos'd on, in Mr. Webb's scheme, where he places only 30 stones equal to the number of the outer circle, the better to humour his fancy of the dipteric aspect, p. 76. He is for persuading us, this is a Roman work compos'd from a mixture of the plainness and solidness of the Tuscan order, with the delicacy of the Corinthian. That in aspect 'tis dipteros hypæthros, that in manner 'tis pycnostylos; which when apply'd to our antiquity, is no better than playing with words. For suppose this inner circle consisted of only 30 stones, and they set as in his scheme, upon the same radius, as those of the outer: what conformity has this to a portico properly, to an order, tuscan, corinthian or any other, what similitude is there between these stones and a column? where one sort is square oblong, the other opposite (by his own account) pyramidal. Of what order is a column, or rather a pilaster, where its height is little more than twice its diameter? Where is the base, the shaft, the capital, or any thing that belongs to a pillar, pillaster or portico? the truth and fact is this. The inner circle has 40 stones in it. Whence few or none but those two intervals upon the principal diameter, happen precisely to correspond with those of the outer circle. Whereby a much better effect is produc'd, than if the case had been as Webb would have it. For a regularity there, would have been trifling and impertinent. Again, Mr. Webb makes these stones pyramidal in shape, without reason. They are truly flat parallelograms, as those of the outer circle. He says, p. 59. they are one foot and a half in breadth, but they are twice as much. Their general and designed proportion is 2 cubits, or two cubits and a half, as they happen'd to find suitable stones. A radius of 23 cubits strikes the inner circumference: of 24 the outer. They are, as we said before, a cubit thick, and 4 cubits and a half in height, which is above 7 foot. This was their stated proportion, being every way the half of the outer uprights. Such seems to have been the original purpose of the founders, tho' 'tis not very precise, neither in design, nor execution. In some places, the stones are broader than the intervals, in some otherwise: so that in the ground-plot I chose to mark them as equal, each 2 cubits and a half. There are scarce any of these intire, as to all these dimensions; but from all, and from the symmetry of these Celtic kind of works, which I have been conversant in, I found this to be the intention of the authors. 'Tis easy for any one to satisfy themselves, they never were pyramidal; for behind the upper end of the adytum, there are three or four left, much broader than thick, above twice; and not the least semblance of a pyramid. I doubt not but he means an obelisk, to which they might some of them possibly be likened, but not at all to a pyramid. Nor indeed do I imagine any thing of an



obelisk was in the founders view; but the stones diminish a little upward, as common reason dictates they ought to do. Nor need we bestow the pompous words of either pyramid, or obelisk upon them. For they cannot be said to imitate, either one or other, in shape, use, much less magnitude: the chief thing to be regarded, in a comparison of this sort. The central distance between these stones of the inner circle, measured upon their outward circumference, is 4 cubits. I observe further, that the two stones of the principal entrance of this circle, correspondent to that of the outer circle, are broader and taller, and set at a greater distance from each other, being rather more than that of the principal entrance in the outer circle. It is evident too, that they are set somewhat more inward than the rest; so as that their outward face stands on the line that marks the inner circumference of the inner circle. I know no reason for all this, unless it be, that the outside of these two stones, is the outside of the hither end of the ellipsis of the adytum: for so it corresponds by measure upon the ground-plot. This is apparent, that they eminently point out the principal entrance of that circle, which is also the entrance into the adytum. For five stones on this hand, and five on that, are as it were the cancelli between the sanctum and sanctum sanctorum, if we may use such expressions. 'Tis scarce worth mentioning to the reader, that there never were any imposts over the heads of these stones of the inner circle. They are sufficiently fasten'd into the ground. Such would have been no security to them, no ornament. They are of a harder kind of stone than the rest, as they are lesser; the better to resist violence.



P. 12. TAB. XII

The Orthography of Stonehenge

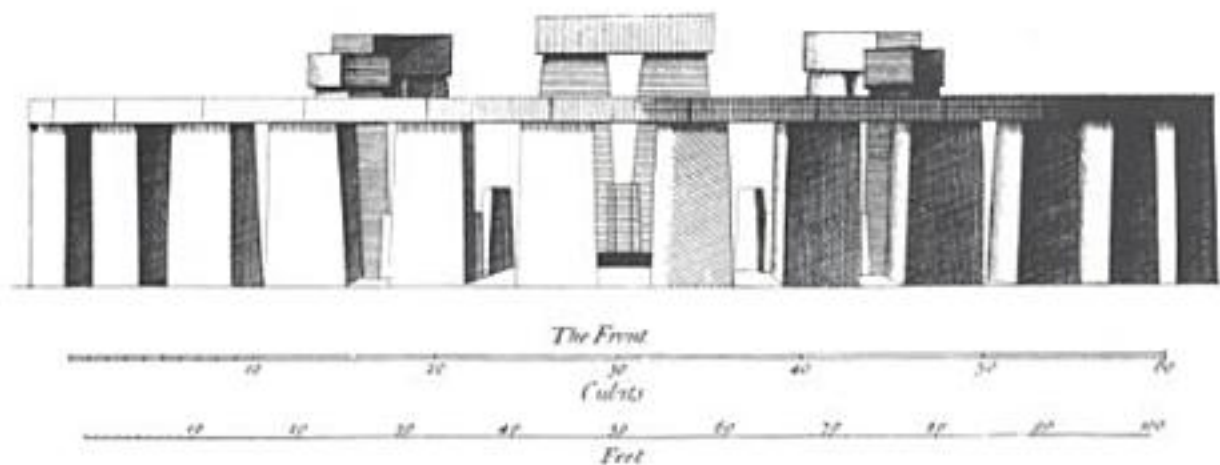


Plate 11. The Geometrical Ground plot of Stonehenge

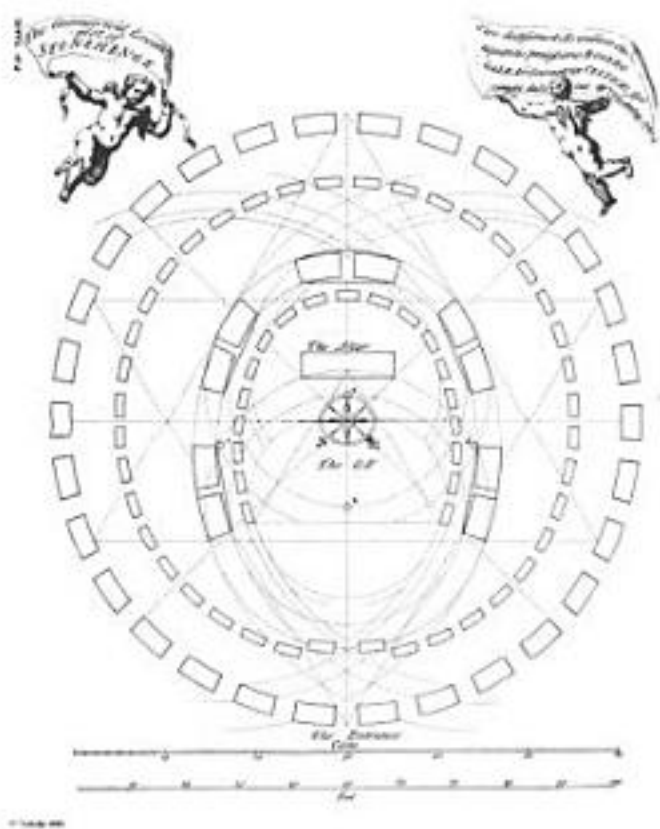


Plate 12. The Orthography of Stonehenge

There are but nineteen of the whole number left; but eleven of them are standing in situ. There are five in one place standing contiguous, three in

another, two in another. The walk between these two circles, which is 300 foot in circumference, is very noble and very delightful. Probably it gave Inigo Jones the idea of designing that fine circular portico, which is one great beauty, among many, in his drawings for White-hall, publish'd lately from the originals by my Lord Burlington; who has a true notion of the extraordinary merit of that great man: and very commendably has reviv'd his memory. Such a circular portico put in execution, would have a marvellous effect, much exceed a common gallery in use, because 'tis a perpetual walk, without turning back, and well becomes a royal residence. The best view of this sort, to be had from our work, is from the north, as in TAB. XVII. the reader cannot but observe, how little pretence here is for an imitation of Greek or Roman portico's, notwithstanding the grand and agreeable curve of the outward circle. But when we see the disproportion of the inner circle in regard to any purpose of this sort, we must own the invention of Hermogenes in contriving the pseudo-dipteros, is here apply'd with an ill grace. The founders of Stonehenge cou'd have no need of make-shifts for want of room on Salisbury plain. Or how could a concentric row of little stones, or pillars if he will so have it, bear any resemblance to the contrivance of Hermogenes, which consisted in having none; in taking away the whole inner row of pillars, so as to add to the convenience of room, and preserve the aspect, at the same time? Most undoubtedly the Druids had no further meaning in it, than to make use of the even numbers of 30 greater stones, and 40 lesser stones; and this was to produce a more perplexed variety, by the interstices having no regard to one another. So far were they from having a notion of Grecian beauty, in the pillars of circular portico's being set on the same radius; pillar answering to pillar, intercolumniation to intercolumniation. And this will be shown repeatedly in the progress of this work, to be the common practice of the Druids in other like instances.

But when we consider the cell, as Mr. Webb names it, we find him guilty of great disingenuity, in ill conceiving the form of it, and in distorting his ground-plots, to colour it over the better. The minute you enter this adytum, as in TAB. XVIII. you discover 'tis not a hexagon, nor ever was intended for one, and there can be no greater absurdity than to imagine it one. It is in truth compos'd of certain compages of stones, which I shall call trilithons, because made, each of two upright stones, with an impost at top: and there are manifestly 5 of these trilithons remaining. But the naked eye easily discovers, they are very far from making 5 sides of a hexagon. They cannot be brought to any approach, of a truly circular polygon. 3



trilithons of the 5 are remaining entire, 2 are ruin'd indeed, in some measure, but the stones remain in situ. And nothing is easier, than to take the ground-plot, from symmetry and correspondency. We see the two trilithons on the wings or sides of the adytum, are set almost in a strait line, one of another; when in a hexagon form, they ought to make a considerable angle. If you examine them trigonometrically, the true angle of an hexagon is 120 degrees, but here is an angle of near 150. And by making it an hexagon, he supposes one trilithon entirely gone, that nearest the grand entrance, when there is not the least appearance that ever there were such stones there. No cavity in the earth, no stump or fragment visible, nor is it easy to imagine, how 3 stones of so vast a bulk could have been clean carried away, either whole or in pieces. There is no room for them to have been carried away whole, no traces of their having been thrown down, broke in pieces and so carried away. This outer side of the work being the most perfect of the whole. Of the ruins of the other trilithons, there is not the least part wanting. What has been thrown down and broke, remains upon the spot. But this trilithon in dispute, must needs have been spirited away, by nothing less than Merlin's magic, which erected it, as the monks fable. Besides, if it were still standing, it would be very far from making this adytum a regular hexagon, to which he has accommodated his peripteros scheme: p. 87. Further, granting it was a regular hexagon, it would be very far from corresponding with that scheme, or have the least appearance, of its being taken from such a one. For our editor there, has converted the cell quite from the nature of that at Stonehenge. He has made the upper end of his cell at the letter H opposite to the grand entrance G, not a trilithon as it is notoriously at Stonehenge, but an angular interval between 2 trilithons. It is not the side of the figure, but the angle. Whereas it is most notorious at Stonehenge, that the upper end of the adytum opposite to the grand entrance, and to the whole length of the avenue and entrance between it and the area, is a trilithon; not an angle or interval. And that trilithon is exceeding stately, tho' in ruins, one of the upright stones being fallen, the other leaning. So that here, we have the cell converted full a 6th part of the whole compass, from its true and original situation, and so in all the schemes of Mr. Webb's book, not one excepted. In that, for instance, Scheme I, p. 56, the high altar is plac'd at D not against a trilithon, as it ought to be, opposite to the grand entrance in the front of the temple, and to the (only) entrance below, into the area, but against an angle between two. If then you suppose that hexagon remov'd back a 6th part, so as that a trilithon be set behind the high altar, as it is really in the thing its self, and upon the principal diameter of the whole work: then this absurd conse-



quence follows, that the opposite trilithon of the cell stands in the very midst of the entrance into the cell, upon the same principal ground-line or diameter of the work, and quite obstructs the view and entrance into it. It is altogether as ridiculous, as if a dead wall was built under St. Paul's organ-loft, which is and ought to be the chief entrance into the choir. Besides, by Webb's ground-plots and uprights, it seems as if, when you entered this adytum, there were 3 trilithons on the right, and 3 on the left, whereas it is most obvious, there are but two on the right, and two on the left; when you advance into it, the orderly way, from the northeast grand entrance of the avenue; which he himself p. 55. owns to be the principal. But I am tired of so ungrateful a task, which necessity alone could have extorted from me.



CHAPTER V.

Of the cell or adytum of Stonehenge. Of the Surgeons amphitheater, London

DISPUTATIONS become cloisters and porticoe's. Let us now with minds free from passion, enter the adytum with an intent to find out its true figure, to examine what it really was, and what it is. And that may easily be done, because (as I said before) as to the trilithons of which it is chiefly compos'd, they are all remaining. Not a bit is lost, but what mischievous and silly people knock off with hammers, to see whether, as the wretched vulgar notion would have it, the stones be factitious. TAB. XVIII. is a design of it, which I made sitting in the center of the grand entrance in the inner circle. This point is properly the door-way or entrance into the adytum, as a wicket or little door, whilst the jambs of the hithermost trilithons present themselves, as the greater door, of above 40 feet wide, 25 cubits. I observe in the old Greek story, many footsteps of the primitive patriarchal way left in their sacred structures, which are parallels to this work before us, and others of our Druids. For instance, Pausanias in atticis speaks of a temple dedicate to Venus, in the front of which, is a wall (as he calls it) built of rude stones. Nevertheless he concludes it to be a very famous work. One may very well imagine, this wall of rude stones is the remnant of some such old work as ours, left for the sacred regard the people had to it, even after art was risen to great height, together with superstition and idolatry. For that the most ancient Greeks had very little of idolatry, any more than our Druids, I shall show when I discourse on that head. Again: the more sacred part of the temple at Hierapolis answering to our Adytum, had no door, tho' none enter'd therein but the chief priests. Lucian de deâ Syria. I suppose it was in imitation of the ancient usage, without doors to shut or open, as our temple here. For the ancients thought it wrong, to confine the deity, as it were, within any cover'd place: 'till Moses, by God's direction, made a tabernacle cover'd with skins, which was to adumbrate the Messiah Son of God, who was to be cloathed with our nature. And Solomon's temple was built in imitation of this tabernacle. But before that, the ancients meant no more by temples, or altars, as they were first call'd, than a certain known and conspicuous place, ornamented

in a particular manner, that should mark out a kebla, or a place towards which we are to address the Deity, and that for uniformity sake. As the Turks and Arabians do now, who are the descendants of Ishmael, and had this custom from Abraham. Tho' the supreme Being be omnipresent, yet for our convenience, where time, place, and such kind of circumstances are necessary to a public action, he would have, as it were, the place of his presence made notorious. As in the Jewish dispensation he did in a most extraordinary manner, by the shechinah. And from Solomon's temple, all the rest of the world borrow'd the fashion of temples, properly so call'd, built magnificently and with roofs. For the sacred houses mention'd in scripture before then, were only little chapels, shrines, like our Druids kistvaens, which sometime they carried about in a cart, sometime were fix'd in cities, for publick use; as Beth Dagon, and the like. These were but kistvaens improv'd, niches turn'd into sacella, in imitation of two or three stones in Abraham's altars, which we may well call the kebla, and find many of them among our Druid antiquities.

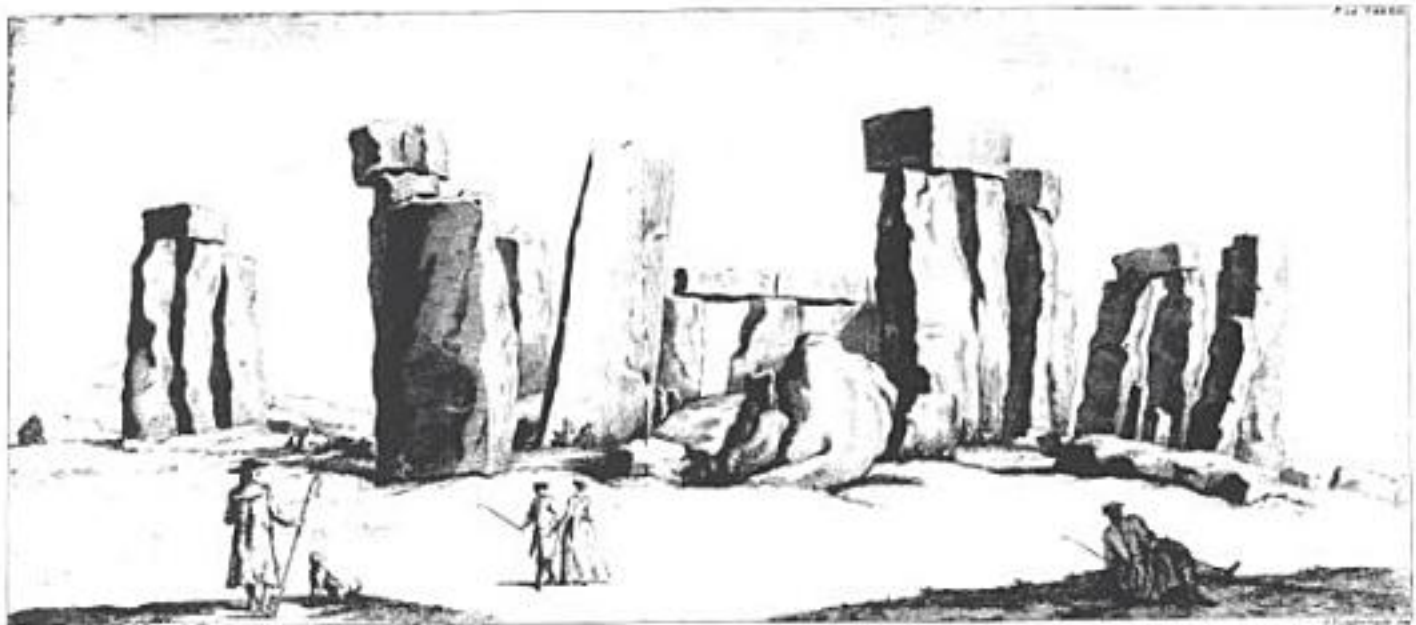
The cell is form'd by a radius of 12 cubits and a half, from the two centers a and b, as to the inward curve; the outward takes a radius of 15 cubits; for these stones are two cubits and a half thick. The two circles are turn'd into an oval, by a radius of 30 cubits, (after the usual manner) set in the two centers c and d, where the two circles intersect. The former centers are 12 cubits and a half distant from each other, the length of the radius. The same oval is obtain'd by a string of 60 cubits, the ends ty'd together, and turn'd round upon two centers, according to the gardeners method. An oval form'd as this is, upon two centers coinciding with each other's circumference; or, which is the same thing, whose centers are distant from each other the length of their radius, is most natural and most beautiful, being the shape of an egg. Most probably these religious philosophers had a meaning, in thus including an egg-like figure, within a circle, more than mere affectation of variety. Whatever that was, we may reasonably conclude, that from the method in antiquity, of making the kebla of a curved figure, the christians borrowed theirs of turning the east end of their churches in that manner; and that the Druids in the work before us, have produc'd the noblest kistvaen or kebla that is known.

My purpose in drawing many prickt lines upon the plate, is not difficult to be understood. Nor does it require particular explanations. To avoid affectation or tediousness, I leave them to the readers amusement: only observe, that Mr. Webb's equilateral triangles have no hand in forming the



cell. The intent of it is very distant from a regular polygon. But that it is incomparably more beautiful; than such a one would have render'd it. It is as a magnificent niche 27 cubits long, and as much broad, measuring in the widest place.

This part is call'd [$\Sigma\eta\kappa\omicron\varsigma$?--JBH] or concha templi and adytum, into which, we may suppose, none but the upper order of priests, together with the high-priest, were commonly to enter, during the time of ministration, in religious rites. We may imagine the beauty of the appearance here upon those occasions, when an innumerable company of the Druids assisted, all in white surplices. The center of the excentricity of this oval is but three cubits nearer the entrance, than the center of the whole work. And they have cut off but one trilithon, which they make the opening of the adytum; meeting the eye to great advantage, from the grand entrance. By the aforesaid contrivance, there is left a space of five cubits between the jambs of the opening of the adytum, and the inner circle in front, just the same as is between the inner and outer circle. The inner circle there performing the office of cancelli to it, as we observ'd before. If a choir of this form was put in practice, and executed by a masterly hand, it would have a very extraordinary effect, and perhaps excel the too similar concave concave of a cupola. Our Druids had undoubtedly such a notion, in placing this within a circle. And for the sake of this, they turn'd the two circles into a smaller species of an ellipsis.



Prospect of STONEHENGE from the Southwest

Plate 13. Prospect of STONEHENGE from the Southwest

There's a Druid antiquity like our adytum in shape, call'd Eglwys Glominog, on the top of Arennig vaur in Lhanykil parish, Merionydshire, but made of a continued wall. The ancients thought the world of an egg-like shape, and as the world is the temple of the Deity, they judg'd it proper to form their temples, so as to have a resemblance thereto. The ancient hieroglyphic of the Deity is a circle, and I have reason to believe it more ancient than the flood. Plato, who learnt much from the ancestors of our Druids, says in Diogenes Laertius, that God is spherical, which he must mean hieroglyphically. So our Druids, as well as he, may mean the infinity of nature in the Deity, who made the world, by this scheme of Stonehenge; at least they understand by the circle, the seat and residence of the Deity, the heavens, which include all things.

It seems to me, that Inigo Jones from this adytum projected the plan of the Surgeons theatre in London, a fabric for seeing and hearing much admired by all good judges. And which my Lord Burlington, out of a spirit truly noble, and a great love for the architect's memory, has lately repair'd, with his own charges and excellent skill. I find the Surgeons theatre (or rather amphitheatre) is form'd from the same proportion as our adytum, the transverse and conjugate diameters being as 4 to 3, viz. 40 foot and 30 foot. And this appears to me a strong presumption, that Inigo Jones did not make the ground-plot of Stonehenge, publish'd under his name. The Surgeons amphitheatre is a good deal less than our cell.

Such is the noble and easy geometry of the adytum of Stonehenge. The stones that compote it, are really stupendous, their height, breadths and thickness are enormous, and to see so many of them plac'd together, in a nice and critical figure, with exactness; to consider, as it were, not a pillar of one stone, but a whole wall, a side, an end of a temple of one stone; to view them curiously, creates such a motion in the mind, which words can't express. One very remarkable particular in the construction of this adytum, has escaped all observers: which is this. As this part is compos'd of trilithons (as I before call them) sett two and two on each side, and one right before; they rise in height and beauty of the stones, from the lower end of the adytum, to the upper end. My meaning is this. The two hithermost trilithons corresponding, or those next the grand entrance, on the right hand, and on the left are exceeded in height, by the two next in order; and those are exceeded by the trilithon behind the altar, in the upper end of this choir. So that in laying down the measures of the parts, that compose this place, the reader must be content to take my word. Mr.



Webb's measures cannot be precise in all of them, seeing he knew nothing of this particular; and that his notion of an hexagon, is contradicted by it, as well as by fact. "He says p. 60. the stones of the greater hexagon seven foot and a half in breadth, three foot nine inches thick, and twenty foot high, each stone having one tenon in the middle." His measure of seven foot and a half in breadth, only shews the vastness of the stones, it is no precise measure, for the founders regarded not any preciseness in their breadth: because two together were design'd to make a compages, whereon to set the impost, and this I call a trilithon. Each trilithon stands by its self, independant of its neighbour, not as the stones and imposts of the outer circle, link'd together in a continued corona, by the imposts carried quite round. Indeed the breadth of a stone at bottom is seven feet and a half, which is 4 cubits and a half. Two stones therefore amount to nine cubits, and there is a cubit of interval between them, making in the whole ten cubits. But they were not careful of the particulars, only of the whole, in one of these compages or trilithons.

The stones of the cell are made to diminish very much, towards the top, most apparently with a design, to take off from their weight, and render them what we call top-heavy, in a less degree. Hence the interval between the two upright stones of the compages widens so much upwards. This must certainly contribute very much, to their stability. In assigning 20 foot for their height, Mr. Webb has well taken the medium. A very small matter more than 20 feet makes exactly 12 cubits of the Hebrews, Egyptians and Druids. The reader remembers the proportion I assign'd between the English foot and this cubit. 20 inches and $\frac{4}{5}$ make a cubit, therefore 20 feet and $\frac{4}{5}$ make 12 cubits. The true case as to the height of the trilithons, is thus respectively, and which may be seen in TAB. XV. with the harmony and symmetry, in the proportion of the whole. We may observe their gradual rising in height, all from the same base, like pillars of higher orders and more diameters. But the intelligent reader must needs see, that our founders never had sight of Greek or Roman pillars, and never pretended to imitate them, or take any one idea from them. And of these three different orders or degrees of altitude, in these trilithons, one exceeds the other by a cubit. So that their heights respectively are 13 cubits, 14. cubits, 15 cubits.

The imposts of these trilithons are all of the same height. Mr. Webb p. 61. "informs us, the architrave lying on the top of the great stones of the hexagon and mortaised also into them sixteen foot long, 3 foot 9 inches

broad, 3 foot 4 inches high." Mr. Webb's 16 foot long, is too scanty, it amounting to 9 cubits and 2 palms, but the intent of the founders was to make these impostes equal both in length and breadth to the foundation of the upright stones that supports them, I mean the two stones at bottom, the sustaining part of the compages, which in its whole breadth makes 10 cubits; and 10 cubits long the impostes are to be assign'd. Most certainly whoever undertake to measure them, whether from those fallen on the ground, or still in their proper place, will be apt to fail in giving them just length. Both because 1. 'tis observable that these impostes are form'd somewhat broader upwards, than in their bottom part; but this may not be taken notice of by every one. This was done very judiciously upon an optical principle, which it is plain the founders were aware of. For a stone of so considerable an elevation, by this means only, presents its whole face in view. Therefore they that measure it at bottom will not take its true length. 2. If they take the dimension, either from a stone still in its proper place, or from one fallen down, they will be very liable to shorten the measure. For in the first case, the upper edge of these impostes, must needs have suffer'd from the weather, in so elevated an exposure, thro' the space of 2000 years. It is very apparent they have suffered not a little. Large and deep furrows of age are visible all around them. But if they measure those fallen, they must well imagine such have doubly suffered, from weather, and from the people every day diminishing all corners and edges, to carry pieces away with them. So that in this case, analogy and symmetry only can supply these defects. Thus we found before, that the breadth of the impostes of the outer circle is equal to their ichnographical breadth: so it is here, being to cubits. Besides, the outer face of these impostes is longer than the inner, as being in the larger circle. Therefore ten cubits is to be understood their medium measure.

Mr. Webb gives it as a general measure, that they are 3 foot 9 inches broad. He has before told us, the uprights which support them were 3 foot 9 thick; take that twice, it makes 7 foot and a half, which he assigns for the breadth, of the uprights. This is all just within a trifle, and it is not expected that he who was not aware of the cubit, by which these works were made, should do it with greater accuracy. The truth of the whole is this: Webb's 7 foot and half is 4 cubits and a half, as we said before; the half of it is 3 foot 9, and a very little more. But this must be taken for the least breadth of the impostes, that at the ends. For in the middle they are somewhat broader. Tho' the inside faces are strait, yet, as we observ'd, in proper place, of the impostes of the outer circle; so here, they are rounded behind: their outer



circumference answering to the great oval upon which they are founded. So likewise their ends are made upon a radius of that oval, whence the inner face of the impost is somewhat shorter than the outer, and is another reason why their lengths may easily be taken somewhat too short. I have drawn the imposts in their true shape in the ground-plot. The artifice of the tenons and mortaises of these trilithons and their imposts, what conformity they bear to that of the outer circle, is exceedingly pretty, every thing being done truly geometrical, and as would best answer every purpose, from plain and simple principles. In the bottom face of the impost, if divided into three squares, the two mortaises are made in the middle of the two outermost squares. Draw diagonal lines from corner to corner; where they intersect, is the center of the mortaise; which central distance from one to the other, is seven cubits of the Druid measure. Each tenon is a cubit broad upon its longest diameter, for they are of an oval figure. An admirable contrivance, that the imposts should lie firm upon the heads of the uprights, and keep the uprights steady in their places, to strengthen and adorn. We may remark this pretty device, in the management of the tenons and mortaises. Cut an egg across upon its shortest diameter or conjugate; one half thereof represents the shape of the tenons of the outer circle. Cut it across upon its transverse diameter, one half is the shape of the tenons of the adytum. 'Tis evident the meaning of it is this. The tenons of the outer circle are higher in proportion, than the others, because the imposts are less and lower than the others, and on both accounts more liable to be disturb'd, either by accident or violence, than the others: therefore more caution is us'd for their preservation. This is an instance of art, noble and simple withal. Mr. Webb says the imposts are 3 foot 4 inches high, which is precisely 2 cubits, a sixth part of the height of the medium order of trilithons; as the imposts of the outer circle are a sixth part of the height of the stones of the outer circle. The medium order of trilithons is above 24 foot high, i.e. 14 cubits. The lower order is 13 cubits, viz. those next the entrance. The upper trilithon behind the altar was 15 cubits. Each rising a cubit higher than the other, as we before observ'd.



The orthographical Section of Stonehenge upon the Cross Diameter.

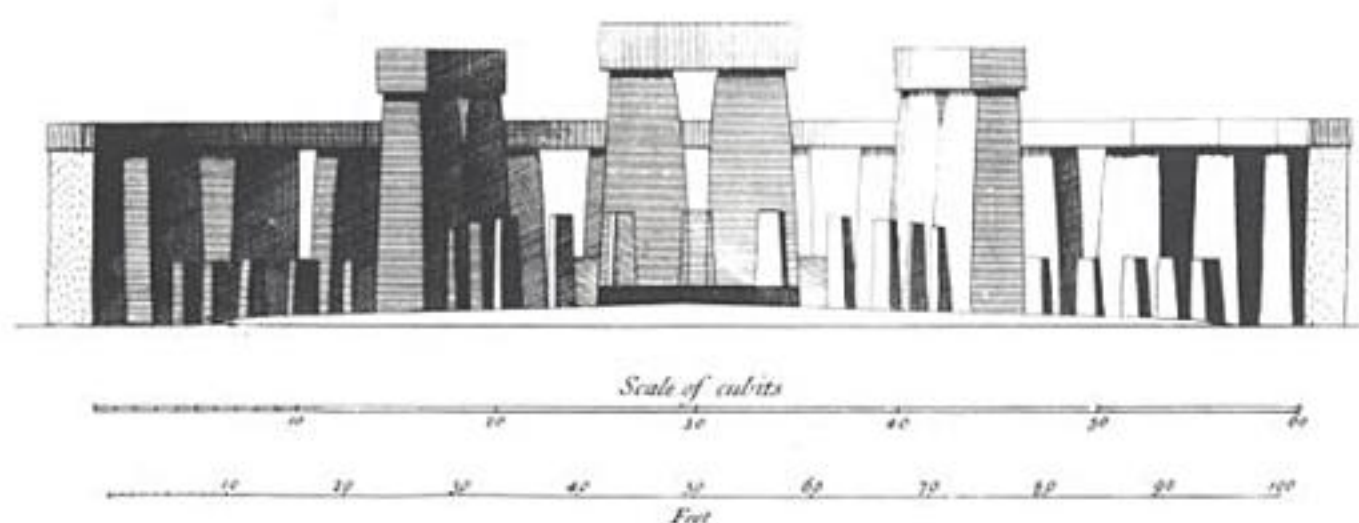


Plate 14. The orthographical Section of Stonehenge upon the Cross diameter

I promis'd to show the reader what Stonehenge is, and what it was. The latter, I presume, is done in the four prints, TAB. XII, XIV, p. XV, XVI. being geometric orthographical sections of the whole work, all necessary ways, such as architects prepare in design, when they set about a building. 'Tis wholly needless to spend many words in explaining them. What the work is, of our adytum at present, is shown in the subsequent prints, TAB. XVIII, XXI, XXII. The Vth corresponds with the XIIth. The one shows the front of the temple when in perfection, the other as now in ruins. The XVIth may be compar'd with XIX and XX. all presenting a view from the adytum toward the entrance. TAB. XVIII. is a contrary view, when one standing by the entrance, looks toward the adytum. The same is presented in Plate VII. which I call a peep into the sanctum sanctorum. XXII. is the same, but a little oblique. This plate shows at present, what the XIVth does in its original. Plate XV and XXI. correspond, showing the adytum on one side, in its perfect, and in its ruinous state. Particularly they explain, what I spoke of, as to the orderly rising of the trilithons in height, one above another, from the lower end to the upper end of the adytum. TAB. XXII. illustrates it, by exhibiting to view, the other and most perfect side of the adytum. 'Tis an oblique prospect of it, from the entrance.



The quantity of the solid is well adjusted, in proportioning the stone-work of this adytum, to the intervals upon the ichnography. Each trilithon is 10 cubits, and each interval about 6. The jambs, or vacuum of the entry expand themselves to 25 cubits, which is about 43 feet. From which measure my Lord Pembroke demonstrated the falsity of Webb's hexagonal scheme, when his Lordship first did me the honour to discourse about Stonehenge. In Mr. Webb's designs, we find two jambs (taking one trilithon away) expand but little above 31 feet, by his own scales. Tho' I don't pretend, but that some of my foregoing measures, may here and there possibly vary a little, upon a very strict trial, and where proper judgment is not us'd, because the stones in some parts may protuberate, or great parts of them may have fallen off; yet 10 foot difference TAB. XIX, XX. from truth cannot be allow'd of. In the Plates XIX and XX. observe the inside of that upright stone, which makes the northern jamb of the chief entrance of the outer circle. A very great piece is fallen off towards the top, which discovers its tenon and the mortaise of the impost above it. And in the management of such prodigious stones as these are, fix'd in the ground, and ramm'd too like posts: 'tis not to be wonder'd at, if by chance we find some little variation. Tho' for my own part, I observ'd none; rather wonder'd, how it was possible for them, without lewices and the like devices, to set them in their places to such preciseness. And the reader, whole mind has receiv'd no prepossession, cannot but be abundantly satisfy'd, that the multitude of measures I have given from Mr. Webb's own account, are perfectly agreeable to the scale of cubits, deduc'd from works of the Egyptians and others: and that in round and full numbers, not trifling fractions. If we collate the numbers given, with the Roman scale, the measures appear very ridiculous and without design; and that is a sure way of confuting the opinion, of its being a Roman work. But as these stones are generally rough, and by time must suffer in all dimensions, 'tis not practical to take their true measure, without necessary judgment, and relation had to symmetry.

Of these greater stones of the adytum, as I observed before, there are none wanting. They are all on the spot, 10 upright stones, 5 cornishes. The trilithon first on the left hand is entire in situ, but vastly decay'd, especially the cornish. There are such deep holes corroded, in some places, that dawn make their nests in them. The next trilithon on the left hand, is entire, compos'd of three most beautiful stones. The cornish happen'd to be of a very durable kind of English marble, and has not been much impair'd by weather. My Lord Winchelsea and myself took a considerable walk on the

top of it, but it was a frightful situation. The trilithon of the upper end of the adytum, was an extraordinary beauty. But alas through the indiscretion probably, of some body digging there, between them and the altar, the noble impost is dislodg'd from its airy seat, and fallen upon the altar, where its huge bulk lies unfractur'd.

Recidit in solidam longo post tempore, terram
Pondus, & exhibuit junctam cum viribus artem. Ovid Met.

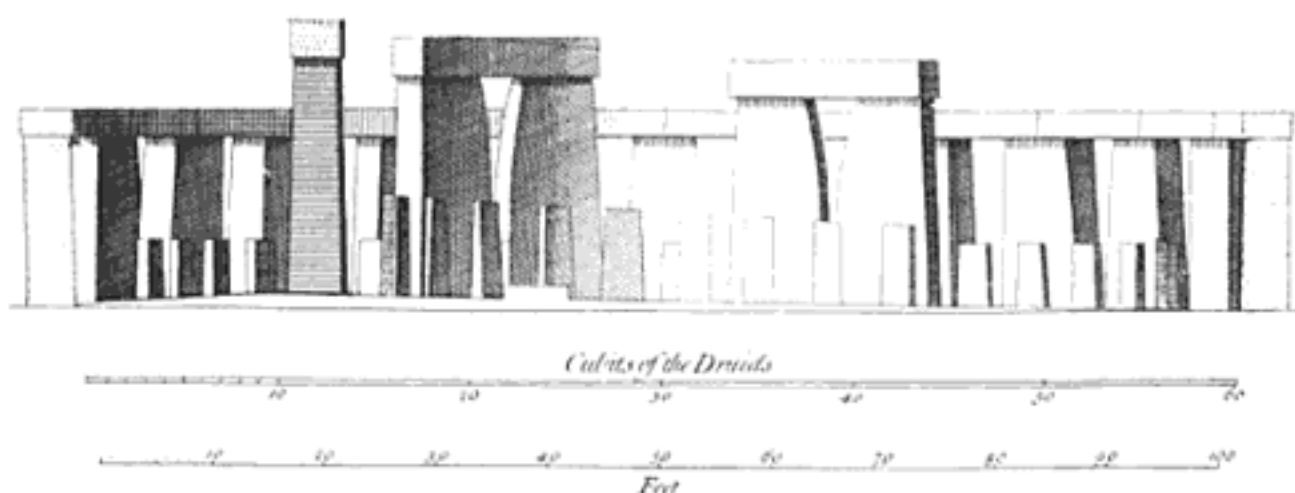
The two uprights that supported it are the most delicate stones of the whole work. They were, I believe, above 30 foot long, and well chizell'd, finely taper'd and proportion'd in their dimensions. That southward is broke in two, lying upon the altar. The other frill stands entire, but leans upon one of the stones of the inward oval.

Jam jam lapsura cadentique
Imminet assimilis-----

The root-end or unhewn part of both, are rais'd somewhat above ground. We cannot be sure of the true height of this, when it was perfect: but I am sure 15 cubits, which I have assign'd, is the lowest. The next trilithon, that toward the west, is intire, except that some of the end of the impost is fallen clean off; and all the upper edge is very much diminish'd by time. As Lucretius says,

P. 23. TAB. XV

The Orthographic Section of Stonehenge upon the Chief diameter





-----Minui rem quamque videmus,
 Et quasi longinquo fluere omnia cernimus ævo,
 Ex oculisque, vetustatem, subducere nostris.

The last trilithon, that on the right hand of the entrance into the adytum, has suffer'd much. The outer upright being the jamb of the entrance, is still standing, the other upright and impost are both fallen forwards into the adytum, and broke each into three pieces. I suppose from digging near it. But from one piece of the impost lying look, in the middle, between the jambs of the adytum, Mr. Webb in the plan of his ruins of Stonehenge (being his 6th Scheme) forms the remains of his imaginary 6th trilithon, supposing it one of the stones of the inner or lesser hexagon, as he calls it. Yet if this fragment was really a stump of such a stone, as he would have it, still it would not create an hexagonal form of the cell, but stand just in the middle of the entrance, and block it up in a very absurd, unseemly, and incomm

Plate 15. The Orthographic Section of Stonehenge up on the Chief diameter

hat there never was such a thing in being. That stone of the trilithon which is standing, has a cavity in it which two or three persons may sit in, worn by the weather.

Stonehenge is compos'd of two circles and two ovals, respectively concentric. At the distance of two cubits inward from the greater oval, describe another lesser oval, on which the stones of the inner oval are to stand: 19 stones in number, at about the central distance of 3 cubits. This lesser oval is to be describ'd by a string and the 2 centers, as before. Or by 2 circles from a 10 cubit radius, and the 2 centers a and b, as of the other before was spoken. Mr. Webb says, p. 60, "the stones of the hexagon within, 2 foot 6 inches in breadth, one foot and a half thick and 8 foot high, in form pyramidal." His two foot and a half is our cubit and half; for the breadth of these stones; being but a third of the breadth of the stones of the greater oval. And the interval between stone and stone, the same. Their height is likewise unequal, as the trilithon, for they rise in height as nearer the upper end of the adytum. Mr. Webb's 8 foot assign'd, is a good medium measure, for it is just 4 cubits and 4 palms, the third part of the height of the medium trilithon. From the ruins of those left, we may well suppose, the first next the entrance and lowest were 4 cubits high; the most advanc'd height behind the altar might be five cubits, and perhaps more. The stones are somewhat of what Mr. Webb calls a pyramidal form, meaning that of an Egyptian obelisk, for they taper a little upwards. They



are of a much harder sort than the other stones, as we spoke before, in the lesser circle. The founders provided that their lesser bulk should be compensated in solidity. They were brought somewhere from the west. Of these there are only 6 remaining upright. The stumps of two are left on the south side by the altar. One lies behind the altar, dug up or thrown down, by the fall of that upright there. One or two were thrown down probably, by the fall of the upright of the first trilithon on the right hand. A stump of another remains by the upright there, still standing. Their exact measures either as to height, breadth or thickness, cannot well be ascertain'd. For they took such as they could find, best suiting their scantlings, but the stones were better shap'd and taller, as advancing towards the upper end of the cell.



CHAPTER VI.

OF the number of the stones. Of the altar-stone. Of what has been found in digging, about the temple. A plate of tin of the Druids writing. A plate of gold, supposed to be of the Druids writing.

THUS have we finished the work, or principal part of this celebrated wonder; properly the temple or sacred structure, as it may be called. Tho' its loftiest crest be compos'd but of one stone, laid upon another. "A work, as Mr. Webb says justly, p. 65. built with much art, order and proportion." And it must be own'd, that they who had a notion, that it was an unworthy thing, to pretend to confine the deity in room and space, could not easily invent a grander design than this, for sacred purposes: nor execute it in a more magnificent manner. Here space indeed is mark'd out and defin'd: but with utmost freedom and openness. Here is a kebla intimating, but not bounding the presence of the Deity. Here the variety and harmony of four differing circles presents itself continually new, every step we take, with opening and closing light and shade. Which way so ever we look, art and nature make a composition of their highest gusto, create a pleasing astonishment, very apposite to sacred places.

The great oval consists of 10 uprights, the inner with the altar, of 20, the great circle of 30, the inner of 40. to, 20, 30, 40 together, make 100 upright stones. 5 imposts of the great oval, 30 of the great circle, the 2 stones standing upon the bank of the area, the stone lying within the entrance of the area, and that standing without. There seems to have been another stone lying upon the ground, by the vallum of the court, directly opposite to the entrance of the avenue. All added together, make just 140 stones, the number of which Stonehenge, a whole temple, is compos'd. Behold the solution of the mighty problem, the magical spell is broke, which has so long perplex'd the vulgar! they think 'tis an ominous thing to count the true number of the stones, and whoever does so, shall certainly die after it. Thus the Druids contented themselves to live in huts and caves: whilst they employ'd many thousands of men, a whole county, to labour at these publick structures, dedicated to the Deity.



Our altar here is laid toward the upper end of the adytum, at present flat on the ground, and squeez'd (as it were) into it, by the weight of the ruins upon it. 'Tis a kind of blue coarse marble, such as comes from Derbyshire, and laid upon tombs in our churches and church-yards. Thus Virgil describes an ancient altar, after the Etruscan fashion, and which probably had remain'd from patriarchal times.

Ædibus in mediis nudoque sub ætheris axe
Ingens ara fuit.----- Æne. II.

Servius upon the III^d Georg. says, in the middle of a temple was the place of the Deity: the rest was only ornamental. This altar is plac'd a little above the focus of the upper end of the ellipsis. Mr. Webb says, p. 56. the altar is 4 foot broad, 16 in length. 4 foot is 2 cubits 2 palms, which at four times measures 16 foot. I believe its breadth is 2 cubits 3 palms, i.e. 1 and a half: and that its first intended length was 10 cubits, equal to the breadth of the trilithon before which it lies. But 'tis very difficult to come at its true length. 'Tis 20 inches thick, a just cubit, and has been squar'd. It lies between the two centers, that of the compasses and that of the string: leaving a convenient space quite round it, no doubt, as much as was necessary for their ministration.

PLATE XVI.

The Section of Stonehenge looking towards the Entrance.

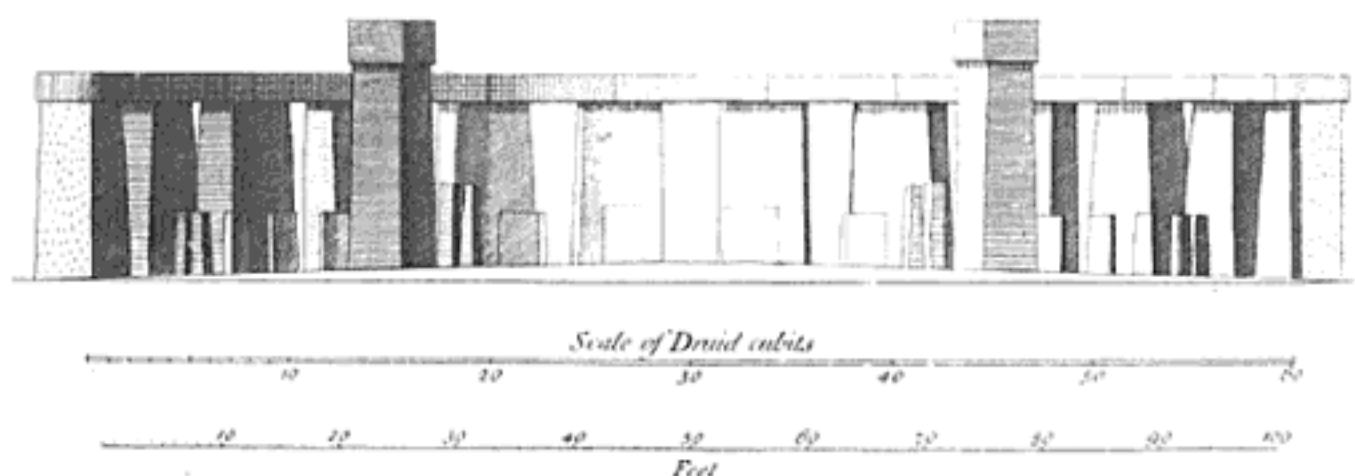
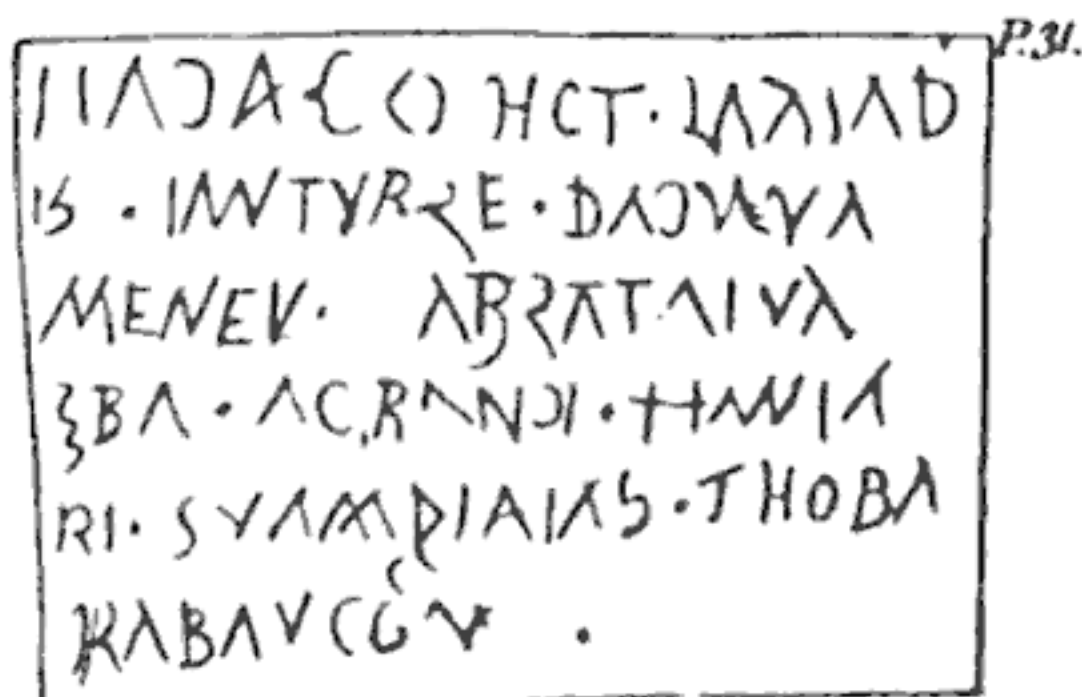


Plate 16. The Section of Stonehenge looking towards the Entrance.



Mr. Webb says, the heads of oxen, and deer, and other beasts have been found upon digging in and about Stonehenge, as divers then living could testify, undoubted reliques of sacrifices, together with much charcoal, meaning wood-ashes. Mr. Camden says, mens bones have been found hereabouts. He means in the barrows adjacent, and I saw such thrown out by the rabbets very near the temple. But eternally to be lamented is the loss of that tablet of tin, which was found at this place, in the time of King Henry VIII. (the Æra of restitution of learning and of pure religion) inscrib'd with many letters, but in so strange a character, that neither Sir Thomas Elliot a learned antiquary, nor Mr. Lilly master of St. Paul's school, could make any thing out of it. Mr. Sammes may be in the right, who judges it to have been Punic; I imagine if we call it Irish, we shall not err much. No doubt but it was a memorial of the founders, wrote by the Druids: and had it been preserv'd till now, would have been an invaluable curiosity. To make the reader some amends for such a loss, I have given a specimen of supposed Druid writing, out of Lambecius's account of the Emperor's library at Vienna. 'Tis wrote on a wry thin plate of gold, with a sharp-pointed instrument. It was in an urn found at Vienna, roll'd up in several cases of other metal, together with funeral exuviae. It was thought by the curious, one of those epistles, which the Celtic people were wont to send to their friends in the other world. So certain a hope of a future pate had the Druids infus'd into them. The reader may divert himself with endeavouring to explain it. The writing upon plates of gold or tin is exceeding ancient, as we see in Job xix. 24.



Plutarch in his pamphlet *de dæmonio Socratis* tells a similar story. "About the time of Agesilaus, they found a brazen tablet in the sepulchre of Ahemena at Thebes, wrote in characters unknown, but seem'd to be Egyptian. Chonuphis, the most learned of the Egyptian prophets then, being consulted upon it, confirm'd it, and said it was wrote about the time of Hercules and Proteas king in Egypt. Tzetzes, *chil. 2. hist. 44.* mentions Proteus a king in lower Egypt by the sea side, pretends he was son of Neptune and Phœnicia, throwing him up thereby to very ancient times, those of the first famous navigators, our Hercules and the Phœnicians. He is said to have lived in the island afterward call'd Pharos, from the watch-tower there erected. Here Homer sings, that Proteus diverts himself with his phocæ or sea-calves, most undoubtedly his ships. But at that time of day, every thing new and strange was told by the Greeks in a mythologic way.

In the year 1635, as they were plowing by the barrows about Normanton ditch, they found a large quantity of excellent pewter, as much as they sold at a low price for 5*l.* says Mr. Aubry in his manuscript collections, relating to antiquities of this sort. There are several of these ditches, being very small in breadth, which run across the downs. I take them for boundaries of hundreds, TAB. XXXI. parishes, &c. Such as the reader may observe in my Plate XXXI. of the barrows in Lake-field. I suspect this too was a tablet with an inscription on it, but falling into the hands of the countrymen, they could no more discern the writing, than interpret it. No doubt but this was some of the old British *stanum*, which the Tyrian Hercules, sirnam'd Melcarthus, first brought *ex Cassiteride insula*, or Britain. Which Hercules liv'd in Abraham's time, or soon after.

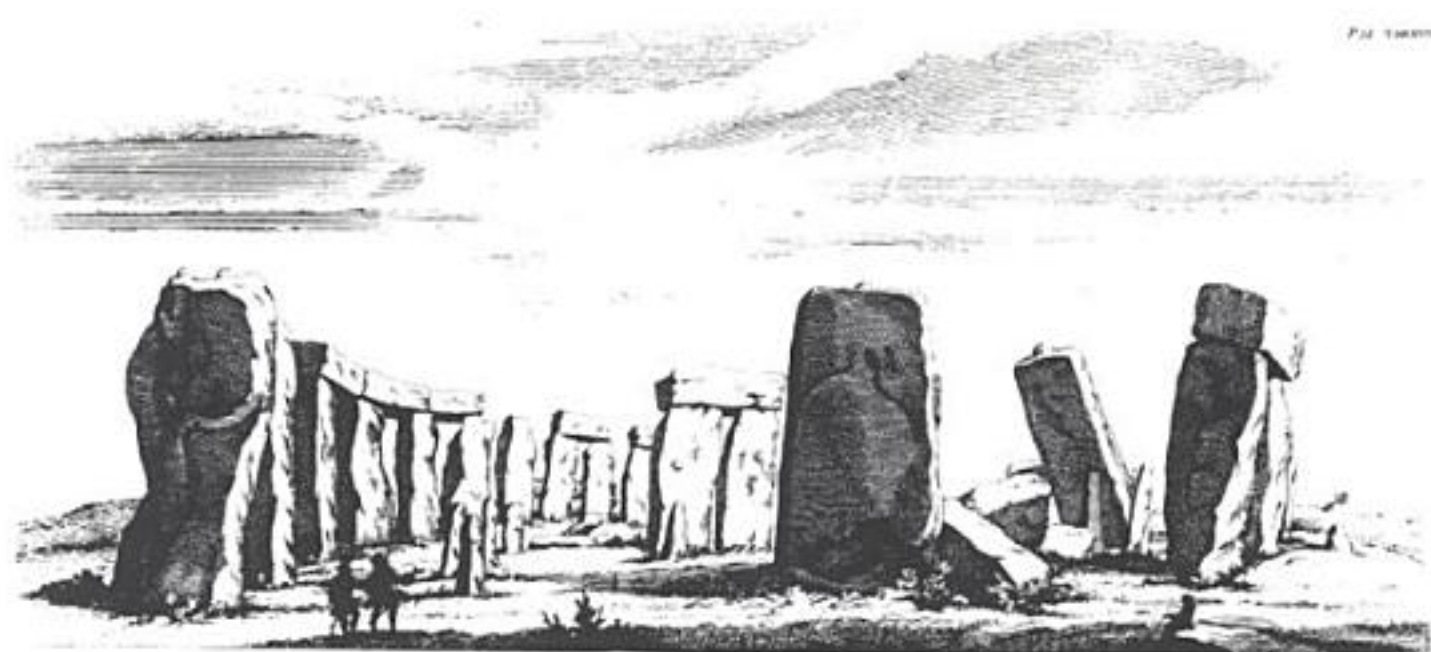
Mr. Webb tells us, the Duke of Buckingham dug about Stonehenge: I fear much to the prejudice of the work. He himself did the like, and found what he imagin'd was the cover of a *thuribulum*. He would have done well to have given us a drawing of it. But whatever it was, vases of incense, oil, slower, salt, wine and holy water, were used by all nations in their religious ceremonies.

Mr. Thomas Hayward, late owner of Stonehenge, dug about it, as he acquainted Lord Winchelsea and myself. He found heads of oxen and other beasts bones, and nothing else. In 1724. when I was there, Richard Hayns an old man of Ambresbury, whom I employed to dig for me in the barrows, found some little worn-out Roman coins at Stonehenge, among the earth



rooted up by the rabbits. He sold one of them for half a crown, to Mr. Merrill of Golden Square, who came thither whilst I was at the place. The year before, Hayns was one of the workmen employ'd by Lord Carlton to dig clay on Harradon hill, east of Ambresbury, where they found many Roman coins, which I saw. I suspect he pretended to find those at Stonehenge, only for sake of the reward. My friend the late Dr. Harwood of Doctors-Commons told me, he was once at Stonehenge with such sort of Roman coins in his pockets, and that one of his companions would have persuaded him, to throw some of them into the rabbit-holes: but the Doctor was more ingenuous. Nevertheless were never so many such coins found in Stonehenge, they would prove nothing more, than that the work was in being, when the Romans were here; and which we are assured of already. I have a brass coin given me by John Collins Esq; collector of the excise at Stamford. The heads of Julius and Augustus averse: the reverse a crocodile, palm-branch and garland. COL. NEM. the colony of Nemausus in France. It was found upon Salisbury plain; and might be lost there before the Roman conquest of Britain under Claudius, by people of France coming hither; or in after-ages: no matter which.

July 5 1723. By Lord Pembroke's direction, I dug on the inside of the altar about the middle: 4 foot along the edge of the stone, 6 foot forward toward the middle of the adytum. At a foot deep, we came to the solid chalk mix'd with flints, which had never been stir'd. The altar was exactly a cubit thick, 20 inches and $\frac{4}{5}$; but broken in two or three pieces by the ponderous masses of the impost, and one upright stone of that trilithon which stood at the upper end of the adytum, being fallen upon it. Hence appears the commodiousness of the foundation for this huge work. They dug holes in the solid chalk, which would of itself keep up the stones, as firm as is a wall was built round them. And no doubt but they ramm'd up the interstices with flints. But I had too much regard to the work, to dig any where near the stones. I took up an ox's tooth, above ground, without the adytum on the right hand of the lowermost trilithon, northward. And this is all the account, of what has been found by digging at Stonehenge, which I can give.



An inward view of Stonehenge, Aug. 1722 from the north

Plate 17. An inward View of Stonehenge. Aug. 1722 from the north.



CHAPTER VII.

OF the area round Stonehenge. The bowing stones. The manner of sacrificing.

OF the court round the temple of Stonehenge, somewhat is said already, and of the two stones standing within the vallum: and of the two cavities remarkable, which have some correspondency therewith. I supposed, they were places, where two great vases of water stood, for the service of the temple, when they perform'd religious rites here. And I endeavour'd to illustrate it by a coin of the city Heliopolis. 60 cubits is the diameter of Stonehenge, 60 more reaches the inner edge of the circular ditch of the court. The ditch originally was near 30 cubits broad, but thro' long tract of time, and the infinity of coaches, horses, &c. coming every day to see the place, 'tis levell'd very much. The intire diameter of the court, reaching to the outward verge of the ditch, is 4 times 60 cubits, which is about 410 foot. The five outer circles of the ditch are struck with a radius of 80, 90, 100, 110, 120 cubits.

Just upon the inner verge of the ditch, at the entrance from the avenue, lies a very large stone, at present flat on the ground. Mr. Webb, p. 57. pretends to give us the measure of it, confounding it with the other two before-mention'd to be within the vallum, to which they have no relation, no similarity in proportion. This is to favour his notion of three entrances of the area, dependant upon his hypothesis of equilateral triangles. He there tells us at the letter F, "the parallel stones on the inside of the trench were four foot broad and three foot thick; but they lie so broken and ruin'd by time, that their proportion in height cannot be distinguish'd, much less exactly measur'd." Thus he, but 'tis invita Minervâ; for all three stones, in all appearance, are as little alter'd from their first size, as any stones in the work. The two stones within the vallum are very small stones, and ever were so. The one stands; the other leans a little, probably from some idle people digging about it. This stone at the entrance is a very great one, near as big as any one of the whole work, and seems too as little alter'd from its original form: only thrown down perhaps by the like foolish curiosity of digging near it. Instead of Webb's four foot broad, it's near seven: but to

speak in the Druid measure, four cubits. It is at present above 20 feet long. If it stood originally, and a little leaning, it was one of those stones which the Welsh call *crwm lechen*, or bowing-stones. However, Mr. Webb must falsify the truth very much, in making this and the two former any thing alike in dimension, situation and use. But he does so, much more in the next, which is doubtless a *crwm leche*, still standing in its original posture and place in the avenue. 'Tis of much the like dimension as the other, tho' not so shapely, and stands in like manner on the left hand, or south, of the middle line, of the length of the avenue. I surmise, the Druids consider'd the propriety of making the other a little more shapely than this, because within the area, and nearer the sacred fabric. There is the distance of 119 feet between them, to speak properly, 80 cubits. This interval Mr. Webb contracts to about 43 foot, and supposes there was another stone to answer it on the right hand, as also another to answer that on the inside the ditch. And he supposes the like of those before-mention'd, both within and without the ditch, at his two fancy'd entrances. But of these, there is *nec vola nec vestigium*, and I dare say, never was. This stone has a hole in it, which is observable of like stones, set thus near our like temples: as we shall see in the progress of this work. The stone is of 24 foot in circumference, 16 high above ground, 9 broad, 6 thick. The use of it I can't certainly tell; but I am inclin'd to think, that as part of the religious worship in old patriarchal times, consisted in a solemn adoration, or three silent bowings: the first bowing might be perform'd at this stone, just without the ditch, the second perhaps at the next stone, just within the ditch. Then they turn'd by that stone to the left hand, as the manner was, in a procession round the temple, both the priests and animals for sacrifice. At those two stones and water-vases, probably there were some washings, lustrations, or sprinklings with holy water, and other ceremonies, which I don't pretend to ascertain. Then upon the entry into the temple, perhaps they made the third bow, as in presence of the Deity. After this, in the court, we may suppose the priests prepar'd the hecatombs and customary sacrifices. If that great stone just within the ditch, always lay, as it does now, flat on the ground, and in situ, (which I am not unwilling to believe) then, I apprehend, it was a table for dressing the victims. Ezekiel, in describing the temple of Jerusalem, speaks of such in the entry, xl. 30, 40, 41, 42, 43.

'Tis just to think, the ancient form of sacrificing here, like that of the Romans, Greeks or elder nations, was pretty much the same as that among the Jews, and that as in patriarchal times; and in short, no other than the original practice of mankind, since the first institution of sacrifices, at the



fall. Therefore we shall subjoin it from Homer's description, in Iliad I. It quadrates extremely well, in all appearance, with the place and temple before us.

Straightway in haste, a chosen hecatomb
To God, prepar'd, the well-built altar round,
They place in order. Then their hands they wash,
And take the salted meal. Aloud the priest,
With hands uplifted, for the assembly prays.
After the prayers, they wav'd the salted meal,
And then retiring slay the animals.
The skins being stript, they cut off both the thighs,
And cover them with cawl; first offer'd crude.
The priest then burns a part on plates, ¹thereon red wine,
Libation pour'd. The ministring young men
Stand by him, with their five-fold spits in hand.
But when the thighs are burnt, out of the rest
Entrails and flesh, harslets and stakes they make,
Upon the spits transfixt. Then roasted well
They set all forth. After the duty done;
A feast they next prepare. Plenty of food
Distributed around, chearful repast.
Banquet being o're, the youths huge goblets crown,
And fill to all in cups. Then sacred hymns
Sung to the Deity, conclude the day.

¹ In another place he adds,
With choice cloven bits of wood,
Without leaves-----

These are most ancient rites, symbolical of the purity of the sacrifice of the Messiah, pointed at by, and deriv'd from the Mosaic dispensation, where every thing of sacred purpose was to be perfect.

Thus much is sufficient to give the reader an idea of the ancient manner of sacrificing, such, no doubt as was practis'd at this very place entirely the Hebrew rite. I suppose only the priests and chief personages came within the area, who made the procession with the sacrifices along the avenue. The multitude kept without, on foot or in their chariots.



CHAPTER VIII.

Of the Avenue to Stonehenge

THE Avenue of Stonehenge was never observ'd by any who have wrote of it, tho' a very elegant part of it, and very apparent. It answers, as we have said before now, to the principal line of the whole work, the northeast, whereabouts the sun rises, when the days are longest. Plutarch in the life of Numa says, the ancients observ'd the rule of setting their temples, with the front to meet the rising sun. Promachidas of Heracleum, and Dionysius Thrax take notice of the same thing. And this was done in imitation of the Mosaic tabernacle and Solomon's temple: probably a patriarchal rite. This avenue extends itself, somewhat more than 1700 feet, in a strait line, down to the bottom of the valley, with a delicate descent. I observe the earth of the ditches is thrown inward, and seemingly some turf on both sides, thrown upon the avenue: to raise it a little above the level of the downs. The two ditches continue perfectly parallel to the bottom, 40 cubits asunder. About midway, there is a pretty depresso, natural, which diversifies it agreeably. Stonehenge, I said, is not on the highest part of the hill. I found, the reason, why the Druids set it just where it is; because it is precisely 1000 cubits from the bottom to the entrance of the area. When I began my inquiries into this noble work, I thought it terminated here, and Mr. Roger Gale and myself measur'd it so far with a chain. Another year, I found it extended itself much farther. For at the bottom of the valley, it divides into two branches. The eastern branch goes a long way hence, directly east pointing to an ancient ford of the river Avon, called Radfin, and beyond that the view of it bears directly to Harradon hill beyond the river. The western branch, from this termination at the bottom of the hill 1000 cubits from the work at Stonehenge, as we said, goes off with a similar sweep at first; but then it does not throw itself into a strait line immediately, as the former, but continues curving along the bottom of the hill, till it meets, what I call, the cursus. This likewise is a new unobserv'd curiosity belonging to this work, and very much enlarges the idea we ought to entertain, of the magnificence and prodigious extent of the thing. The temple which we have been hitherto describing, considerable indeed as it really is, in itself; yet now appears as a small part of the whole. I shall therefore describe all these parts separately,



to render them more intelligible: and then show their connection, and what relation they have, to one another, as well as I can. But it is not easy to enter at once, into the exceeding greatness of thought, which these people had, who founded it; bringing in all the adjacent country, the whole of nature hereabouts, to contribute its part to the work. Therefore I shall discourse of it backward and forward; first going from Stonehenge to its termination, or more properly its beginning, and then return again. Explaining all the way, what is its present condition, and what, 'tis reasonable to suppose, was its original, when the Druids made their first design. This together with the several views I have drawn of it, will give us nearly as good a notion of the whole, as we can at this day expect, and perhaps preserve the memory of it hereafter, when the traces of this mighty work are obliterated with the plough, which it is to be fear'd, will be its fate. That instrument gaining ground too much, upon the ancient and innocent pastoritall life; hereabouts, and everywhere else in England: and by destructive inclosures beggars and depopulates the country.

At the bottom of the valley, and the end of the strait part of Stonehenge avenue, 100 cubits from Stonehenge, as we said, the eastern wing of the avenue turns off to the right, with a circular sweep, and then in a strait line proceeds eastward up the hill. It goes just between those two most conspicuous groups of barrows, crowning the ridg of that hill eastward of Stonehenge; between it and Vespasian's camp, separated from them both by a deep valley on each side. These two groups of barrows are called generally the seven king's graves, each. I call that most northerly, the old seven kings graves, for there are really 7, tho' but 6 most apparent; they are all set at greater distance, all broader, flatter, and as it is most reasonable to suppose, older than the other. The other are set closer together, of a more elegantly turn'd figure, campaniform, and in all appearance, much later than the former. Therefore I call these, being southward and directly between Stonehenge and the town of Ambresbury, the new seven kings barrows. Of the seven old, the most northerly one and probably the oldest, is exceeding flat and as it were, almost sunk into the earth with age; so that it is scarce visible at a distance. The avenue runs up to the top of the hill, just between them: and they make as it were wings to it, and I believe were design'd as such, when set there. When the avenue first turns off in the valley, it is much obscur'd by the wheels of carriages going over it, for a great way together: for this is the road to Lavington. Nevertheless a curious eye, without difficulty, sees all the traces of it sufficiently, till it is got higher up the easy ascent of the hill, and out of the

common road. Then it is very apparent and consists of the two little ditches as before, (when coming directly from Stonehenge) exactly parallel, and still 40 cubits asunder. And it is made with the same degree of variation, or about 6 degrees southward from the true east point. So that it is evident again, the Druids intended it should go full east, but their compass by which they set it, varied so much at that time, according to my opinion of the matter. To perpetuate the mark of it as much as I can: I measured the distance of it from the southern ditch thereof, to the ditch of the nearest i.e. most northerly of the new 7 kings barrows, and when in the right line of those 7 barrows: it is 257 feet. I know not whether there was any design in it, but it is exactly 150 cubits. From the northern ditch of the avenue here, to the nearest of the old seven kings barrows, is 350 foot; which is exactly 200 cubits.

Whilst we are here upon the elevation of this hill, between these two groups of barrows, 'tis 2700 feet from the beginning of this wing of the avenue at the bottom of the valley, where it commences. It still continues in the very same direction eastward, till unfortunately broke off by the plow'd ground, 300 feet from hence. This plow'd ground continues for a mile together, as far as the river's side at Ambersbury. So that 'tis impossible to trace it any farther. The first plow'd field, that southward, is Mr. Hayward's; the other is of a different estate, call'd Countess-farm. And the plowing of these two go on at right angles one of another. That piece on the north side of the avenue, of the latter tenure, goes along the line of the avenue, is long and narrow, and has (as usual with greedy farmers) encroach'd upon and swallow'd up so much of the length of the avenue. And that amounts to 750 feet more in length, which must certainly be added to the avenue. This is all along the eastern declivity of the hill we are upon, that of the twice seven kings graves, and reaches near the bottom of the valley, between it and the hill whereon stands Vespasian's camp. Now reason and the judgment I have got in conversing with works of this kind, tell me, the founders would never begin this avenue at the bottom of a valley, but rather on a conspicuous height, which is visible from a great distance of country round. We must suppose the intent of the avenue was to direct the religious procession to the temple; and that at the beginning of it, they made fires early in the morning of that day, when they held their grand festivals, to give notice to all the adjacent country. Therefore when we cross this valley still eastward, with the former direction of the compass, and mount that next hill, whereon stands Vespasian's camp: we find exactly such a place as we could wish, and extremely suitable to that



purpose. For it commands a very extensive prospect both upwards and downwards of the river, and on the other side of it, for many miles; all about that part of the country where it is highly reasonable to think the old Britons liv'd, who frequented this temple. This eminence is north of Vespasian's camp, north-west from Ambresbury church. Here is a very large scene of the country taken in. It has a fine gentle rise for half a mile and more, even quite from the ford at Radfin. You see the most delightful river Avon flank'd with villages on both sides, from almost as far as new Sarum, and then to the head of it, 5 miles off. It was the custom of the Druids to give notice, by fires, of the quarterly days of sacrifice. Thus the Druids in Ireland before christianity, us'd to kindle a fire call'd in their language Tlachdgha, on All saints eve, to perform a general sacrifice: as Mr. Llwyd mentions in his Irish dictionary. Mr. Toland speaks of others too. I observ'd there has been a bank across the bottom of the valley, for the more easy passage of the religious ceremony, and this much corroborates my conjecture of the avenue reaching hither.



Inward View of Stonehenge from the high altar. Aug. 1722.

Plate XXIV. explains all that I have last said about this avenue, and shews its direction to Haradon Hill, on the other side the river.

I am apt to believe from the conformity I have observ'd in these works, that there was a sacellum or little temple here upon this hill, where the avenue began. We suppose this might easily be destroy'd when they began to plow

here, being so near the town. I have found several of these kind of large stones, either travelling to Stonehenge, or from it. One as big as any at Stonehenge, lies about 3 miles off northward, in Durlington fields. Another in the water at Milford, another at Fighelden; they seem to have been carried back to make bridges, mildams or the like, in the river. There is another in the London road, east from Ambresbury, about a mile from the town. Another in the water at Bulford. A stone stands leaning at Preshute farm near the church, as big as those at Stonehenge. What confirms me in the conjecture that there was a sacellum here originally, is, that an innumerable company of barrows on the opposite hill, on the other side of the river coming down Haradon, and in the line of the avenue seem to regard it; as is usual in these works. For those barrows are not in sight of Stonehenge itself, by reason of the interposition of the hill whereon stand the double groups of seven king's graves. And even those two groups seem to regard this little temple as well as the great one, curving that way. The distance from hence to Stonehenge is 4000 cubits.

In order to have a just notion of this avenue, it is necessary to go to the neighbouring height of Haradon hill, on the other side the river. The largest barrow there, which I call Hara's and which probably gave name to the hill, is in the line of the avenue; the ford of Radfin lying between, as we see in the last Plate. I stood upon this hill May 11. 1724. during the total eclipse of the sun, of which I gave an account in my *Itinerarium*. Here is a most noble view of the work and country about Stonehenge. Whoever is upon the spot cannot fail of a great pleasure in it; especially if the sun be low, either after rising or before setting. For by that means the barrows, the only ornaments of these plains, become very visible, the ground beyond them being illuminated by the sun's slanting rays. You see as far as Clay-hill beyond Warminster 20 miles off. You see the spot of ground on the hill, whereon stands Vespasian's camp, where I conjecture the avenue to Stonehenge began, and where there was a sacellum, as we conceive. From hence to that spot a valley leads very commodiously to Radfin, where the original ford was.

This Radfin-farm seems to retain its Celtic name: meaning a ford or passage for chariots, the old way of carriage here used. *Rhedeg currere*, *rhedegsain cursitare*, in Irish *reathaim*. *Fin* in the old Irish, is white. It regards the chalky road which went up from the ford. 'Tis a pretty place, seated in a flexure of the river, which from hence seems to bend its arms both ways, to embrace the beginning of the avenue. The place is very warm, shelter'd



from all winds, and especially from the north. I am persuaded it was originally a seat of an Archdruid or Druid. See Mr. Toland discoursing of the Druids houses, p. 111. The nuns of Ambresbury too had a chapel there. The ford is now quite disus'd, because of the bridge by the town's end; and the road of it is foreclos'd by hedgerows of pastures on both sides the lane, leading northwards from Ambresbury to north Wiltshire. This road lying between Radfin and the beginning of Stonehenge avenue, is sweetly adorn'd with viorna. We are supposed now to stand on the tumulus of Hara, an old Irish royal name, and possibly the king who was coadjutor in founding Stonehenge, who lived, it's likely, in the eastern part of Wiltshire: for which reason they directed the avenue this way.

Et nunc servat honos sedem, tuus, ossaque nomen.

Here are very many barrows upon this side of the hill, all looking toward the sacred work. Hence we survey Ambresbury, Vespasian's camp, and Stonehenge, the cursus, and little Ambresbury. Likewise a very ancient barrow which answers to that of Vespasian's camp, seeming to be plac'd here with some regularity and regard to the sacellum at the beginning of the avenue. This is a long barrow, which I suppose the Archdruids who liv'd at Radfin, and perhaps the chief person concern'd in projecting the magnificent work. The reader must indulge me the liberty of these kind of conjectures; there is no evidence positive left in such matters of great antiquity. I have some little reason for it, which I shall mention when we speak of the barrows. There is this present use, to affix thereby names to things, that we may talk more intelligibly about them.

We are next to advance down Haradon-hill in the same direction, nearer Radfin, from whence I drew Plate XXV. This valley leads us very gently to the river.

-----Qua se subducere colles

Incipiunt, mollique jugum demittere clivo

Usque ad aquam.-----

Virg.

This and the two views in Plate XXVI. give us a good notion of the country on this side. There are seven barrows together, in the road from Ambresbury to Radfin, one great one and six little ones, which regard the sacellum, but cannot possibly to Stonehenge. This was a family burying-place probably of some considerable personage, who liv'd at Ambresbury. These



plates show us too, the avenue marching up the next hill, where the old and new seven kings barrows receive it again, as wings to it. This is shown more distinct in the next plate, TAB. XXVII. where the corn ground has began to encroach upon it. I could scarce forbear the wish,

Pereat labor irritus anni.-----

When you are gone a little farther toward Stonehenge, and arriv'd at the top of the hill, if you turn back you have the view presented to you like that TAB. XXIV. beyond A the beginning of the avenue, is Radfin, beyond that Haradon. The prospect forward, toward Stonehenge, is shown TAB. XXVIII. There you see the union of the two wings of the avenue, at the commencement of the strait part of it C. Again, you may observe the nature of the west wing of the avenue, going with a continued curve round the bottom of the hill, till it enters the Hippodrom or cursus. At a distance you see Yansbury camp, thought to be another of Vespasian's. Next you descend into the valley to the union of the wings of the avenue, and ascend the agreeable part delight one to have seen it in its first splendor!



Plate 20. An inward view of Stonehenge from behind ye high Altar looking toward the grand entrance. A little oblique. Aug. 1722.

A the altar

O

-----Jam nunc solennes ducere pompas



Ad delubra juvat, cæsosque videre juvenes. Virg.

I have often admir'd the delicacy of this ascent to the temple. As soon as you mount from the bottom, 'tis level for a great way together: and the whole length o it is a kind of ridge, for it slopes off both ways from it on each side; so that the rain runs off every way. Just about half way there is a depresso, as a pause or foot pace, showing one half of the avenue ascending, the other descending, both magnificent, in the ancient gusto. There was a temple of Jupiter Labradæus near Mylasa a city of Caria, much frequented. The way leading thither was called sacred, and pav'd 60 furlongs, thro' which their procession went. Philostratus says, you went to the temple of Diana at Ephesus, by a stone portico of a stadium. Pausanias in Phocicis says, the avenue to the temple of Minerva Cranea near Elatea is ascending, but so gently that it is imperceptible. Again in Chap. X. we read of a pav'd way, to the oracle at Delphos. But the natural pavement of our avenue is much finer. I take notice, that Jupiter Labradæus was a statue holding a halbard in his hand, which instrument like a securis or amazonian ax, was as a scepter to the Lydian kings. And apparently our English halbard is the very word, with an asperate way of pronunciation prefix'd, Labrada. So our Druids carried about a sharp brass instrument which we often find, call'd a celt, (I know not whence) with which they us'd to cut the Mistletoe, at their great festival in midwinter. I have represented one hanging at our Druids girdle, in it TAB. I. was to be put into the slit at the end of his staff, when used. But of this hereafter. Now with the Poet in his celebrated Ode

-----Quibus
Mos unde deductus per omne
Tempus, Amazonia securi
Dextras obarmet, quærere distuli:
Nec scire fas est omnia----- Horat.

being arriv'd again at Stonehenge, from the last print, TAB. XXVIII. though TAB. XXVIII. small, we may see the beauty of the curve in the outer circle of that work, especially from the avenue, when the eye is below it. We observe the same in the grand front view. TAB. V. TAB. V.

And now we are return'd to the sacred fabric, we will discourse a little upon these temples in general, and so conclude this chapter.

In Macrobius Saturn. l. 18. mention is made of a famous round temple in Thrace, where they celebrate most magnificent religious rites. It is upon the hill Zilmissus. The temple is open at top. I suppose like ours, not a little round hole like as in the Pantheon, nor is it a small round sacellum like those little round temples at Rome to Romulus, to Vesta, &c. It is not reasonable to think they should build a Pantheon in Thrace, nor can I understand it otherwise, than that, it was like our Stonehenge, and in truth an ancient patriarchal structure of a primitive model. The Deity here worshipp'd was call'd Sabazius says he, some make him Jupiter, some the sun, some Bacchus. These are the first perversions of the Jehovah of the Jews. In my Judgment, the name Sabazius is a corruption of the Hebrew name of God צבאות sabaoth, Deus exercituum, a title that would well suit the warlike Thracians. In time Idolatry debased every thing. When they perform'd the religious rites of Bacchus, they cried Evohe, Sabbai, and call'd him Evius, Evan, Sabazius, &c. Evohe is a corrupt manner of pronouncing יהוה Jehovah, and this sacred cry is truly no other than what frequently occurs in holy scripture. יהוה צבאות Jehovah Sabaoth. He is the king of glory, Psalm xxiv. 10. But I have discoursed on this head in my *Paleographia Sacra* No I. which will be continued.

Diodorus Siculus in his Book II. mentions a very eminent temple of a round form, among the Hyperboreans, as he calls them, who inhabit an island situate in the ocean over-against Gaul, which is not less than Sicily. He gives an odd account from thence mix'd with fable, and seemingly some reports of Stonehenge itself.

Mr. Toland is confident, this hyperborean region is our Schetland isles, whence Abaris the Druid and hyperborean philosopher, famous in Grecian story. Whilst I am writing this, March 6. 1739-40. we had an account read before the Royal Society, much confirming Mr. Toland's notion; speaking of the admirable temperature of the air there, not subject to such extremities, such sudden changes, as even in Britain itself. There are such temples as ours there.

Arnobius in VI. speaking of the origin of temples, "We don't, says he, make temples to the Gods, as is we design'd to shelter them from the rain, the wind, the sun: but that we may therein present ourselves before them, and by our prayers, after a sort, speak to them as if present." We may well affirm this of our temple, built after the manner of the patriarchal ones, tho' probably an improvement, and somewhat more magnificent. Ours



consists of two ovals and two circles. Many in our island, which I suppose older than Stonehenge, consist of one oval, or niche-like figure made of three stones only, (of which our adytum is a more magnificent specimen) and a circle of rude stones fix'd in the ground; of which our work, crown'd with a circular cornish, is a more magnificent specimen. Sometime I meet with a niche without a circle, sometime a circle without a niche. We may well say, the circle is analogous to our chapels, churches, or cathedrals, according to their different magnitude; the niches correspond to our choirs, altars, and more sacred part of the sacred building, the more immediate place of the residence of the Deity. They are what now the Turks and Arabians call the kebla, deriv'd, as we said before, from the patriarchal practice, and particularly from the great patriarch Abraham. I doubt not but the altars which he and his posterity made, mention'd in scripture, were a stone upon the ground before three set in a niche-like figure, and the whole inclos'd in a circle of stones. At other times they set only one stone for a kebla, as sometime our ancestors did likewise. This practice was propagated generally among all ancient nations. Among many it was forgotten, or not practised, where they had but little religion at all. Among others, after idolatry had prevail'd with them, they thought all former manners of worship like their own, and mistook the stones which were kebla's or places of worship, for the objects of worship. Hence Maximus of Tyre says, the Arabians worshipp'd he knew not what, for he saw only a great stone. Which, no doubt, was the kebla toward which they directed their devotion, as they had learnt from Abraham, or the like patriarchal ancestors. So Pausanias in Achaicis says, the ancient Greeks worshipp'd unhewn stones instead of statues; more particularly among the Pharii, near the statue of Mercury, were 30 square stones, which they worshipp'd. If our author could not make his narration agreeable to common sense, he might well mistake this ancient patriarchal temple, somewhat like ours of Stonehenge, for a circle of deities: he himself being a stranger to any other than image-worship. I shall handle this matter more largely hereafter, and now let us descend again from the temple to the cursus. Only I would close this chapter with this short reflection. This avenue is proof enough (is there needed any) that our work is a temple, not a monument, as some writers would have it. But it requires no formal confutation.



CHAPTER IX.

OF the Cursus. Games exercis'd on holy festivals. The Druids understood geometry.

ABOUT half a mile north of Stonehenge, across the first valley, is the cursus or hippodrom, which I discover'd august 6. 1723. 'Tis a noble monument of antiquity: and illustrates very much the preceding account of Stonehenge. It was the universal custom, to celebrate games, feasts, exercises and sports, at their more publick and solemn meetings to sacrifice. Which was done quarterly and anniversarily, at certain stated seasons of the year. Macrob. Satur. I. says, "Upon holy days dedicated to the gods, there are sacrifices, feasts, games and festivals. For a sacred solemnity is, when sssacrifices are offer'd to the gods, or holy feastings celebrated, or games pesssrform'd to their honour, or when holy days are observ'd." This great work is included between two ditches running east and west in a parallel, which are 350 foot asunder. When I mention 350 foot, I speak in the gross, and as we should set it down in an English scale: but if we look into Plate VI. where I have given a comparative view of our English foot, and the most ancient cubit; at first sight we discern, this measure means 200 of the Druid cubits. This cursus is a little above 10000 foot long: that is, it is made of 6000 Druid cubits in length. A most noble work, contriv'd to reach from the highest ground of two hills, extended the intermediate distance over a gentle valley: so that the whole cursus lies conveniently under the eye of the most numerous quantity of spectators. To render this more convenient for sight, it is projected on the side of rising ground, chiefly looking southward toward Stonehenge. A delightful prospect from the temple, when this vast plain was crouded with chariots, horsemen and foot, attending these solemnities, with innumerable multitudes! This cursus, which is two miles long, has two entrances (as it were:) gaps being left in the two little ditches. And these gaps, which are opposite to each other, in the two ditches, are opposite to the strait part of Stonehenge avenue.

I mention'd before, that at the bottom of the strait part of Stonehenge avenue, in the valley, the avenue divides itself into two parts. One goes directly east toward Radfin, the other goes northwestward, and enters our cursus nearly at the same distance west from the gaps or entrances before-



mention'd: as those gaps are from the east end of the hippodrom. These gaps being at a convenient distance from that east end, may be thought to be in the nature of distance posts. It seems to me, that the turf of the adjacent ground on both sides, has been originally taken off, and laid on the whole length of this cursus, because it appears somewhat higher in level. Tho' this was an incredible labour, yet a fine deign for the purpose of running. The earth of the vallum is likewise thrown inward.

The east end of the cursus is compos'd of a huge body of earth, a bank or long barrow, thrown up nearly the whole breadth of the cursus. This seems to be the plain of session, for the judges of the prizes, and chief of the spectators. The west end of the cursus is curv'd into an arch, like the end of the Roman circus's. And there probably the chariots ran round, in order to turn again. And there is an obscure barrow or two, round which they return'd, as it were, a meta.

This is the finest piece of ground that can be imagin'd for the purpose of a horse-race. The whole is commanded by the eye of a spectator in any part. In the middle is a valley, and pretty steep at present: yet only so, as that a British charioteer may have a good opportunity of showing that dexterity, spoken of by Cæsar. But the exquisite softness of the turf prevents any great damage by a fall. The ground of it hereabouts declines somewhat northward. The main part of this hippodrom is upon a gentle ridge running east and west. This render'd the place cooler.

On the southern ridge, toward the west end of it, are many considerable barrows: but none towards the east end, for that would obstruct the view of Stonehenge. There are many barrows but of no considerable bulk, on the north-side, upon the extensive ascent, toward the great north long barrow. This magnificent work of the cursus is drawn due east and west: except a small variation of 4 or 5 degrees southward from the east. If we measure along the bank, TAB. XXIX. from the eastern meta, at 700 cubits exactly, we come over against the middle line of the strait part of the avenue to Stonehenge: 500 cubits further conducts us to the gaps or opposite entrances, I before mention'd; which we suppose as distance posts. The whole interval between the eastern meta and these gaps, is 1200 cubits. At 1000 cubits more, we come to the place where the west wing of the avenue enters the southern ditch of the cursus. That west wing too, is just 1000 cubits long to its union, with the strait part of Stonehenge avenue. Likewise the strait part of Stonehenge avenue is just TAB. XXVIII.

cubits long, as mention'd in its proper place. This west wing begins, in the bottom of that valley, which crosses the middle of the cursus and sweeping along by the bottom of the hill, in a gentle curve, meets with the lower end of the strait part of Stonehenge avenue, where the wing or avenue unites to it, with an equal angle. So that the whole work is laid out with great judgment and symmetry; and curiously adapted to the ground, which was well consider'd, before the plot was mark'd out, by the first surveyors. From the bottom of the valley crossing the middle of the cursus, to the western meta is TAB XXX. 3800 cubits more, making in the whole 6000 cubits. The north end of the eastern meta does not extend so far as the northern bank of the cursus: I suppose, the reason is, that there might be liberty that way, to stop the horses, at the end of the course. Therefore they set out, on the south side of the cursus and return'd by the north side. I observe the ditch and bank towards the eastern end of the cursus much obscur'd, by the trampling of men and horses, frequenting the spectators here: this being the most throng'd.

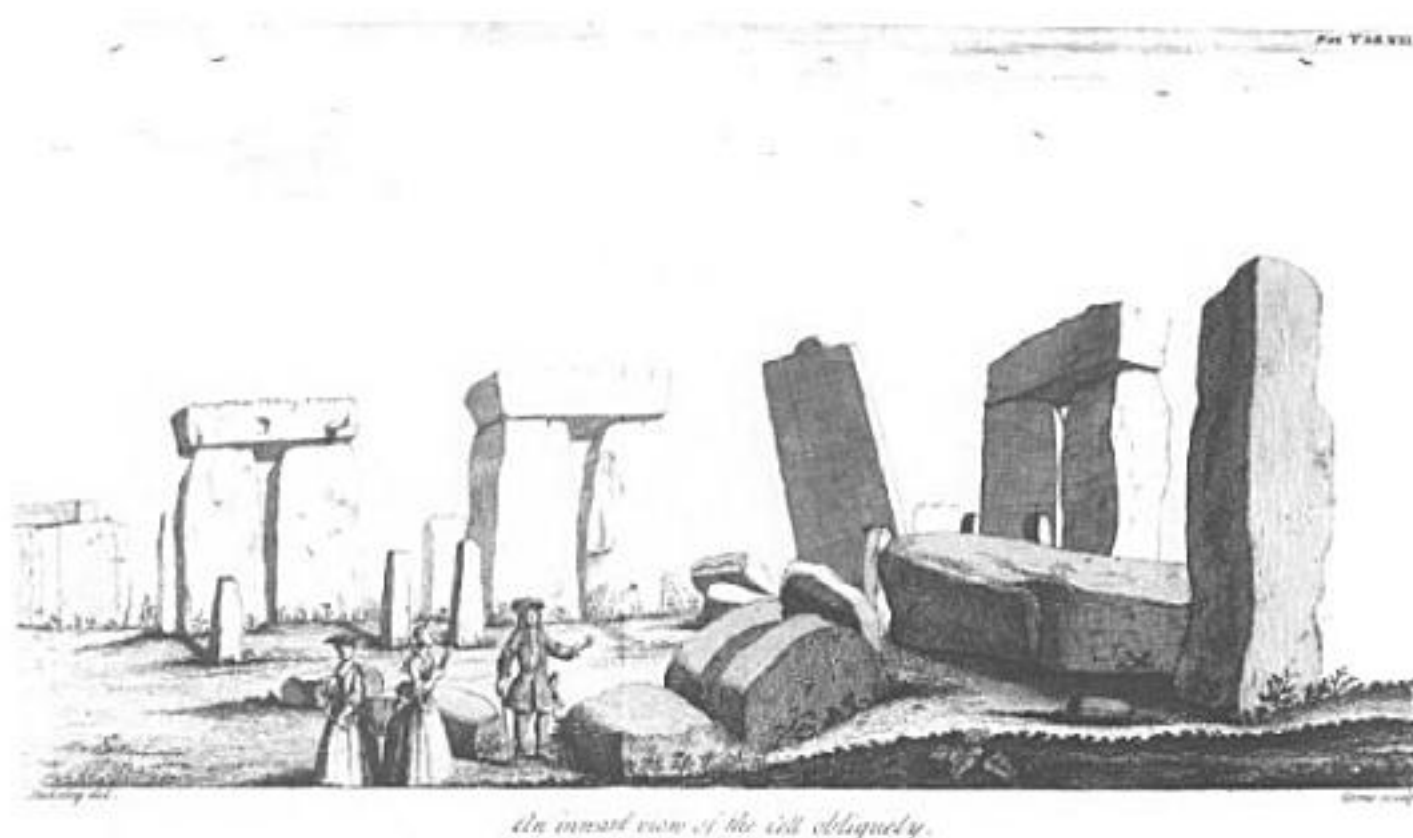
The Cursus is directly north from Stonehenge: so exactly, that the meridian line of Stonehenge passes precisely thro' the middle of the Cursus. And when we stand in the grand entrance of Stonehenge and observe the two extremities of the Cursus the eastern and western meta, they are each exactly 60 degrees from the meridian line; on each hand: making a third part of the circle of the horizon. By which we see, the Druids well understood the geometry of a circle, and its measure of 360 parts.

Pausanias in Beotic. says, 'among the Thebans, by the gate Prætis is the Gymnasium of Jolaus and likewise the stadium, which is a bank of earth thrown up, such as that at Olympia and of the Laurii. In the same place is the heroical monument of Jolaus. A little beyond, to the right is the hippodrom, and in it Pindar's monument. The same author in Arcad. VIII. writes, that before the walls of Mantinea, in a field, was a stadium made for horse-races, in honour of Antinous. Not far from it was the temple of Neptunus equestris and others.' So that we see it was the manner of the ancient Greeks thus to define their places for sports by banks of earth, and that near their temples.

After the Romans had borrow'd the use of the British chariots for travelling and the like, they us'd them too in the Circensian games. Thus Sidonius Apollinaris his poem upon it, Lib. XXII.



Instant verberibus simul regentes,
Jamque & pectora prona de covinno
Extensi rapiuntur.-----



An inward view of the cell obliquely.

Plate 22: An inward view of the Cell obliquely

Again,

Tunc cœtus juvenum sed aulicorum
Elœi simulachra torva Carapi
Exercent, spatiantibus quadrigis.
-----tandem murmura buccinæ strepentis
Suspensas tubicen vocans quadrigis,
Effundit celeres in arva currus.
Hinc agger sonat, hinc Arar resultat,
Hinc se se pedes atque eques reflectit,
Stridentum & moderator essedorum.

Such, we may well imagine, was the scene of this place, in ancient days. And as the poet mentions the river Arar, I may take notice, in passing, that I have seen, several other places of sports and racings, which I take to have belong'd to the ancient Britons. As particularly those two great banks call'd Rawdikes in the meadow near Leicester, which spectators look on as unaccountable. Another such work, I have seen in the meadow by



Dorchester, the ancient Roman city and episcopal see, in Oxfordshire. Both are by the side of rivers. Another upon the river Lowther by Perith in Cumberland.

These places by rivers, were more agreeable to the Greek taste, as in a hotter country. Another like place of sports, was in the chalky valley just without the town of Royston, on the south side of it, by the London road. The old Roman road there, or Hermen-street passes over one corner of the work, as being of later date. I may, perhaps, describe these more largely, another time. We read in Homer and Virgil that races were celebrated at funerals.s



CHAPTER X.

OF the barrows, or sepulchral tumuli about Stonehenge. Generally set in groups, which are family burial places; and in sight of Stonehenge. They are single burial places. How the body is posited. What has been found in digging into these barrows.

I COME in the last place to speak of the barrows, observable in great numbers, round Stonehenge. We may very readily count fifty at a time, in sight, from the place; easily distinguishable: but especially in the evening, when the sloping rays of the sun shine on the ground beyond them. These barrows are the artificial ornaments of this vast and open plain. And it is no small entertainment for a curious person, to remark their beauties, their variety in form and magnitude, their situation. They are generally of a very elegant campaniform shape, and done with great nicety. There is likewise a great variety in their shape, and turn, and in their diameters, in their manner of composition. In general, they are always upon elevated ground, and in sight of the temple of Stonehenge. For they all regard it. This shews, they are but superficial inspectors of things, that fancy from hence, great battels on the plain; and that these are the tumultuary burials of the slain. Quite otherwise; they are assuredly, the single sepulchres of kings, and great personages, buried during a considerable space of time, and that in peace. There are many groups of them together, and as family burial places; the variety in them, seems to indicate some note of difference in the persons there interr'd, well known in those ages. Probably the priests and laity were someway distinguish'd; as well as different orders and stations in them. Most of the barrows have little ditches around, extremely well defin'd. In many is a circular ditch 60 cubits in diameter, with a very small tumulus in the center. 60 or even too cubits is a very common diameter in the large barrows. Often, they are set in rows, and equidistant, so as to produce a regular and pretty appearance, and with some particular regard to the parts of the temple, the avenues, or the cursus. For instance, where the avenue begins at the first elevation, from Radfin ford, advancing towards Stonehenge, seven large and flat old barrows are on the right hand of the avenue, towards the east end of the cursus, seven large barrows of a newer shape, are on the left hand: both these groups before spoken of, are

plac'd in a similar manner, in regard to the avenue, and as wings or openings to it. Upon every range of hills, quite round Stonehenge, are successive TAB. IX groups of barrows, for some miles: and we may even observe, that great barrow by Lord Pembroke's park at Wilton, which I call the tomb of Carvilius, is set within view of Stonehenge.

In 1722, my late Lord Pembroke, Earl Thomas, who was pleas'd to favour my inquiries at this place, open'd a barrow, in order to find the position of the body observ'd in these early days. He pitch'd upon one of those south of Stonehenge, close upon the road thither from Wilton: and on the east side of the road. 'Tis one of the double barrows, or where two are inclos'd in one ditch: one of those, which I suppose the later kind, and of a fine turn'd bell-fashion. It may be seen in Plate IX. On the west side, he made a section from the top to the bottom, an intire segment, from center to circumference. The manner of composition of the barrow was good earth, quite thro', except a coat of chalk of about two foot thickness, covering it quite over, under the turf. Hence it appears, that the method of making these barrows was to dig up the turf for a great space round, till the barrow was brought to its intended bulk. Then with the chalk, dug out of the environing ditch, they powder'd it all over. So that for a considerable time, these barrows must have look'd white: even for some number of years. And the notion of sanctity annex'd to them, forbid people trampling on them, till perfectly settled and turf'd over. Hence the neatness of their form to this day. At the top or center of this barrow, not above three foot under the surface, my Lord found the skeleton of the interr'd; perfect, of a reasonable size, the head lying toward Stonehenge, or northward.

The year following, in order to prosecute this inquiry, by my Lord's order, I begun upon a barrow north of Stonehenge, in that group south of the cursus. 'Tis one of the double barrows there: and the more easterly, and lower of the two: likewise somewhat less. It was reasonable to believe, this was the sepulture of a man and his wife: and that the lesser was the female: and so it prov'd, at least a daughter. We made a large cut on the top from east to west. After the turf taken off, we came to the layer of chalk, as before, then fine garden mould. About three foot below the surface, a layer of flints, humouring the convexity of the barrow. These flints are gather'd from the surface of the downs in some places, especially where it has been plow'd. This being about a foot thick, rested on a layer of soft mould another foot: in which was inclos'd an urn full of bones. This urn was of unbak'd clay, of a dark reddish colour: crumbled into pieces. It had



been rudely wrought with small mouldings round the verge, and other circular channels on the outside, with several indentures between, made with a pointed tool, as depicted in Plate XXXII. where I have drawn all the sorts of things found in this barrow. The bones had been burnt, and crouded all together in a little heap, not so much as a hat crown would contain. The collar bone, and one side of the under-jaw are grav'd in their true magnitude. It appears to have been a girl of about 14 years old, by their bulk and the great quantity of female ornaments mix'd with the bones, all which we gather'd. Beads of all sorts, and in great number, of glass of divers colours, most yellow, one black. Many single, many in long pieces notch'd between, so as to resemble a string of beads, and these were generally of a blue colour. There were many of amber, of all shapes and sizes, flat squares, long squares, round, oblong, little and great. Likewise many of earth, of different shapes, magnitude and colour, some little and white, many large and flattish like a button, others like a pulley. But all had holes to run a string thro', either thro' their diameter, or sides. Many of the button sort seem to have been cover'd with metal, there being a rim work'd in them, wherein to turn the edge of the covering. One of these was cover'd with a thin film of pure gold. These were the young lady's ornaments. And had all undergone the fire: so that what would easily consume fell to pieces as soon as handled. Much of the amber burnt half thro'. This person was a heroin, for we found the head of her javelin in brass. At bottom are two holes for the pins that fastned it to the staff. Besides, there was a sharp bodkin, round at one end, square at the other, where it went into a handle. I still preserve whatever is permanent of these trinkets. But we recompos'd the ashes of the illustrious defunct, and cover'd them with earth. Leaving visible marks at top, of the barrow having been open'd, to dissuade any other from again disturbing them: and this was our practice in all the rest.

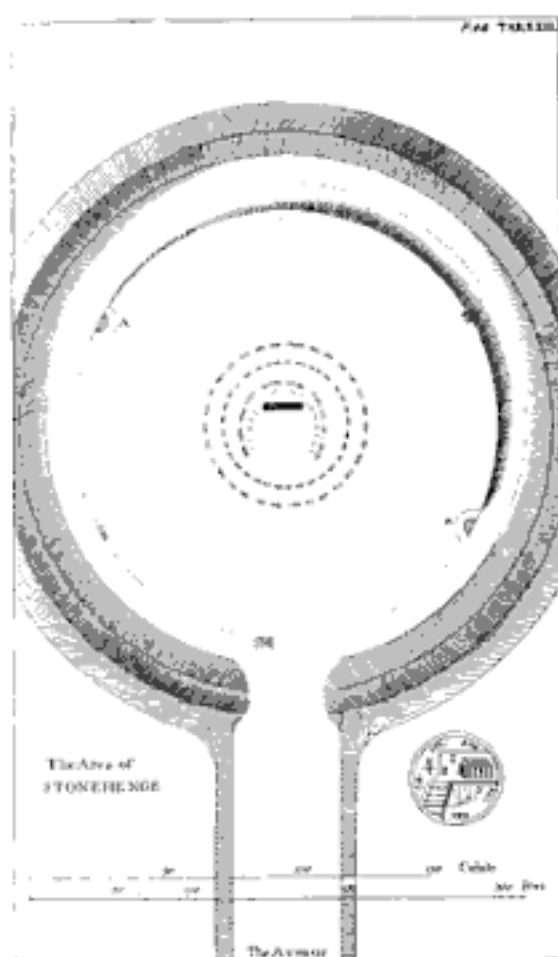


Plate 23. The Area of Stonehenge

Then we op'd the next barrow to it, inclos'd in the same ditch, which we suppos'd the husband or father of this lady. At fourteen inches deep, the mould being mix'd with chalk, we came to the intire skeleton of a man. The skull and all the bones exceedingly rotten and perish'd, thro' length of time. Tho' this was a barrow of the latest sort, as we conjecture. The body lay north and south, the head to the north, as that Lord Pembroke open'd.

Next, I went westward, to a group of barrows whence Stonehenge bears east north-east. Here is a large barrow ditch'd about, but of an ancient make. On that side next Stonehenge are ten lesser, small, and as it were crouded together. South of the great one is another barrow, larger than those of the group, but not equalling the first. It would seem, that a man and his wife were bury'd in the two larger, and that the rest were of their children or dependants. One of the small ones, 20 cubits in diameter, I cut thro', with a pit nine foot in diameter, to the surface of the natural chalk, in the center of the barrow; where was a little hole cut. A child's body (as it seems) had been burnt here, and cover'd up in that hole: but thro' the length of time consum'd. From three foot deep, we found much wood ashes soft and black as ink, same little bits of an urn, and black and red earth very rotten. Some small lumps of earth red as vermilion: some flints



burnt thro'. Toward the bottom a great quantity of ashes and burnt bones. From this place I could count 128 barrows in sight. See a vast multiplicity of 'em, TAB. XXXI.

Going from hence more southerly, there is a circular dish-like cavity dug in the chalk, 60 cubits in diameter, like a barrow revers'd. 'Tis near a great barrow, the least of the south-western group. 'Tis between it, and what I call the bushbarrow, set with thorn-trees, TAB. XXXII. This cavity is seven feet deep in the middle, extremely well turn'd, and out of it, no doubt, the adjacent barrow is dug. The use of it seems to have been a place for sacrificing and feasting in memory of the dead, as was the ancient custom. 'Tis all overgrown with that pretty shrub *erica vulgaris*, now in flower, and smelling like honey. We made a large cross section in its center upon the cardinal points; we found nothing but a bit of red earthen pot.

We dug up one of those I call Druid's barrows, a small tump inclos'd in a large circular ditch. I chose that next to bushbarrow, westward of it. Stonehenge bears hence north-east. We made a cross section ten foot each way, three foot broad over its center, upon the cardinal points. At length we found a squarish hole cut into the solid chalk, in the center of the tumulus. It was three foot and a half, i.e. two cubits long, and near two foot broad, i.e. one cubit: pointing to Stonehenge directly. It was a cubit and half deep from the surface. This was the *domus exilis Plutonia* cover'd with artificial earth, not above a foot thick from the surface. In this little grave we found all the burnt bones of a man, but no signs of an urn. The bank of the circular ditch is on the outside, and is 12 cubits broad. The ditch is 6 cubits broad (the Druid's staff) the area is 70 cubits in diameter. The whole 100.

I open'd another of these of like dimensions, next to that Lord Pembroke first open'd, south of Stonehenge. We found a burnt body in a hole in the chalk, as before. Mr. Roger Gale was with me.

In some other barrows I open'd, were found large burnt bones of horses and dogs, along with human. Also of other animals as seem'd; of fowl, hares, boars, deer, goats, or the like. And in a great and very flat old fashion'd barrow, west from Stonehenge, among such matters, I found bits of red and blue marble, chippings of the stones of the temple. So that probably the interr'd was one of the builders. Homer tells us of Achilles slaying horses and dogs, at the funeral of his friend Patroclus.



Lord Pembroke told me of a brass sword dug up in a barrow here, which was sent to Oxford. In that very old barrow near little Ambersbury, was found a very large brass weapon of 20 pounds weight, like a pole-ax. Said to be given to col. Wyndham. In the great long barrow farthest north from Stonehenge, which I call north long barrow, and supposed to be an Archdruid's, was found one of those brass instruments call'd celts, which I hold to belong to the Druids, wherewith they cut off the misletoe, as before mention'd. Mr. Stallard of Ambersbury gave it to Lord Burlington, now in Sir Hans Sloane's cabinet: 13 inches long. They dug a cell in a barrow east of Ambersbury, and it was inhabited for some time. There they found all the bones of a horse. This is the sum of what is most material, that fell within my observation, relating to the barrows about Stonehenge. We find evidently, these ancient nations had the custom of burning their dead bodies, probably before the name of Rome. So lachrymatories we read of in scripture, ancients than Greek or Roman times, Psalm lvi. 8.

TAB. XXXI. the barrows in Lake-field. This is as a church-yard, the burial-place of some town, or large family. I mention'd before, that the ditches observable here, are hounds of parishes, hundreds or lordships. The countrymen sometime call this group, the prophets barrows. Because the French prophets 30 years ago, set up a standard on the largest barrow, and preach'd to the enthusiastic multitude.

TAB. XXXIII. bush-barrow, a barrow planted by the shepherds. 'Tis south of Stonehenge, and commands a pleasant prospect of the temple, the cursus, the avenue, and of all the barrows arounds this plain. You see the hills a little on this side Abury, whereon runs the Wansdike, the boundary of the Belgic kingdom.

TAB. XXXIV. the tumulus of Carvilius who fought Julius Cæsar. 'Tis on the other side of Wilton (Carvilium) by Lord Pembroke's park: and planted with four trees, as one of the visto's to the park.

TAB. XXXV. one of the temples at Persepolis a patriarchal one, open: but made after Solomon's temple, square: with mouldings and ornaments. I take it to be of the same age as Stonehenge.



Plate 24. The back Prospect of the beginning of the Avenue to Stonehenge, 6 Aug. 1723.

A. the beginning of the avenue. B. the old Kings barrows. C. the 7 Kings barrows. D. Vespasians camp.



CHAPTER XI.

OF the original name of Stonehenge, and a conjecture of the general time of building such kind of works. Of Wansdike, by whom made and when. Of Vespasian's camp. Stonehenge was call'd the Ambers, or Main Ambres: which mean the anointed stones, i.e. the consecrated, the sacred stones? The meaning of the word Ambrosia. The Tyrian Hercules brought the Druids hither, with Abraham's religion. Apher a grandson of Abraham's, his companion.

I Have inform'd the reader, to the best of my skill, what was, and what is the state of Stonehenge, both above, and below ground. I apprehend, it will be expected, that I should say somewhat, concerning the antiquity and time of erecting these works, especially of Stonehenge. But what can we say, of a matter so very remote? where the oldest memoirs and reports of the oldest nation inhabiting the island, can give us no satisfaction about it: but are as far to seek, as to the founders of this wonderful work, as we are, at this time, and are forced to apply to magic: in order to account for it. Notwithstanding, I shall endeavour to satisfy the readers curiosity, in this point, as well as I can; by giving him my own opinion about it. Not doubting of his candour, in so arduous an attempt: which may perhaps be an amusement to him, whether it gains his belief, or not. Therefore, I shall recite, in short, what occurs to me, on this subject. 1. As to the antiquity of these temples in general. 2. Of the time of founding Stonehenge.

The former will anticipate, in some sort, what I promis'd, in treating of the temples of the Druids in general. But I am naturally led to it, here, by observing, that the name of the adjacent town of Ambersbury, points out a relation to the work of Stonehenge, and to the ancient name of it. For as we took notice at first, the present name of Stonehenge, is purely Saxon, given by our latest ancestors, by a people wholly strangers to the purport of the thing, that had no notion, no report of its having once been a sacred place; and signifies no more than hanging-stones, or a stone-gallows. The ancient Britons call'd it choir-gaur, which the Monks latiniz'd into chorea gigantum, the giants dance; a name suited to the marvelous notion they had of the structure, or of the reports of magic, concern'd in raising it. But I had rather chuse to think choir gaur in Welsh, truly means, the great



church; the cathedral, in our way of speaking. A general title, which the Welsh inhabitants, the remnants of the Belgæ, conquer'd by the Romans, gave it; as well knowing the true use of it, and even frequenting it in a religious way. Tho' they had driven off the first possessors of it, and the builders: I mean in Divitiacus his time, or sooner, before the Roman invasion.

There is a very plain reason: that Stonehenge was built, before the Wansdike was made, and that was the last boundary of the Belgic kingdom in Britain. The stones of which Stonehenge is compos'd, were fetcht from beyond that boundary, consequently then an enemies country. It seems not improbable, that the Wansdike was made, when this Belgic kingdom was at its height, and that time we may well guess at, from Cæsar. "He tells us in Bell. Gall. Lib. II. 4. the Belgæ are of German original. By force of arms, they possess'd themselves of the countries, south of the Rhine and towards the ocean, driving out the Gauls. They were a very warlike nation, and could produce 100 000 men in arms. That one of their kings Divitiacus, in the memory of some then living, obtain'd the government, both of great part of Gaul and in Britain too." I believe the Belgæ and Sicambri, all one people of German original. Our Welsh call themselves Cymri, and from them Cumberland has its name. It is very just to think this Wansdike was made in the time of Divitiacus, both because of the greatness of the work, suiting so potent a prince, and because it is the laic boundary: after that time, the Roman power swallowing up all divisions.

I judge, we may reasonably place the time of making the Wansdike, about 50 years before Cæsar wrote, we may say AUC. 650. Divitiacus probably ordered it to be made in person. And it seems to have been drawn from the upper end of the Tees river, about Whit-church, and Andover, in Hampshire: to the Avon river, about Bristol. These two rivers and the Wansdike separated the Belgic kingdom from the old Celtic Britons. They by this means, were driven from this beautiful country, and from their stately temple of Stonehenge, by these powerful invaders. It is remarkable enough, that the inhabitants of Somersetshire, the ancient seat of the Belgæ, retain still the Belgic, liquidating pronunciation, v consonant for f. z for s.

The Devizes is a town in the middle of the length of Wansdike, very probably erected, among others, to secure this ditch or fortification. It seems to have been the capital fort or frontier town, and to have its name

from the king, as a trophy or monument of his power: built by him in person. Anonymus Ravennas may possibly call it Punctuobice, but we have no certainty, that his copy retains the word uncorrupt, or that he transcribed it right: nor what alteration the Romans made in the original word, nor what was made in the later and barbarous times. However there seems enough therein, as well as in the present name of the town, to countenance our conjecture. The former part of the word punctuo, which Mr. Baxter thinks monstrous, may come, perhaps, from the German word pooghen, which signifies an arduous work, and might regard the castle here, which is said to have been once, the strongest in Europe. Neubringensis calls it Divisæ. They tell us legendary forces of its being built by an old British king.

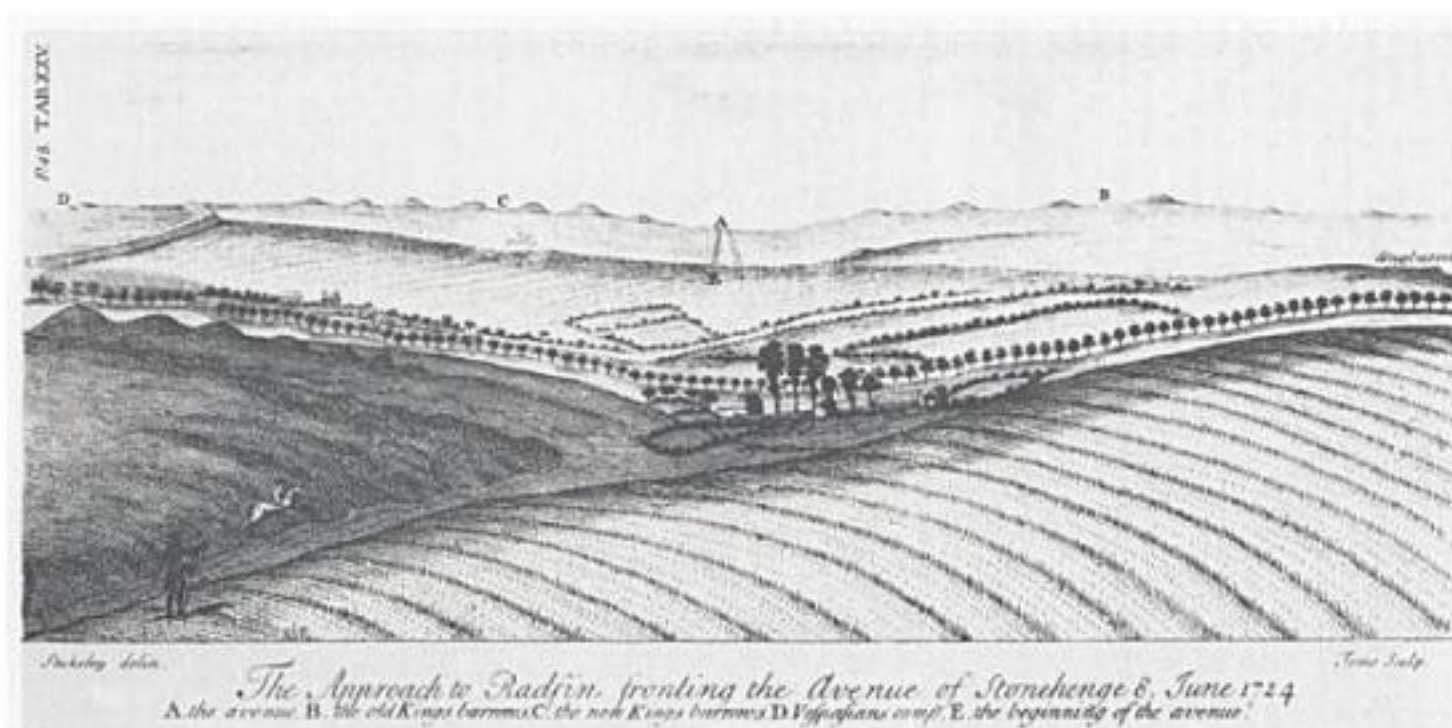
Divisus was probably the name of this Belgic Monarch, or Duiguis: as Gluiguis king of Demetia in Wales is wrote Glivisus in Toland, p. 186. and the termination may have been form'd into Latin, from the Celtic word taeog dux. Whence, perhaps, the Etruscan Tages, so much boasted of in their antiquities; likewise the modern Doge of Venice. So that Divitiacus may well be Divisus dux. The name of the Wansdike, I shewed to be purely Celtic, p. 4.

It is an ancient oriental custom to make these boundary ditches. Thus the land belonging to the several tribes of Israel was marked out by a ditch, as we read in the accounts of the holy land. Particularly the author of *le voyage de la terre sainte*, printed 1675. Paris, p. 57. says, "he travell'd five or six miles along such a ditch going from Joppa to Jerusalem, which parted the tribes of Benjamin and Judah." 'Tis recited Joshua XV.

The monkish writers make much ado about Aurelius Ambrosius, a christian king of the Britons (in the time of our great ancestor Hengist) building Stonehenge, by the help of Merlin Ambrosius the magician, in memory of the British nobility slain treacherously by Hengist, at Ambresbury. Some say the fact was committed ad pagum Ambri, others call it cœnobium Ambrij, others ad montem Ambrij. One while they refer the name to Ambrosius, another time to an Abbot Ambrius, and this was among our Roman British ancestors, who were christians. They add too, that Merlin fetch'd these stones out of Ireland, that they had been brought before, out of Africa into Ireland: that he set them up here in the same form, by art magic; and that the stones were of a medicinal Virtue. These matters we read in Girald.



Cambrens. de admirand. Hib. c. 18. Higden's Polychron. v. Geoff. Monmouth VIII. Matt .Westminster, &c.



The Approach to Radfin fronting the Avenue of Stonehenge 8. June 1724.
A. the avenue. B. the old Kings barrows. C. The new Kings barrows. D. Vespasians
camp. E. the beginning of the avenue.

This calls to my memory, what the above-mention'd Dr. Harwood inform'd me, he had heard the great Sir Christopher Wren say, that there were such structures as Stonehenge, in Africa, being temples dedicate to Saturn. But I need not be tedious in observing, how absurd the Monkish reports are; of a christian king erecting Stonehenge, as a sepulchral monument for the British nobility, massacred in the monastery of Ambresbury. At the same time they say, their bodies were buried in the church-yard of the monastery. Nor how they confound the names of Ambrosius the king, Ambrius the abbot, the town, abby and mountain of Ambry, and perhaps of Merlin too, for one of them was call'd Ambrosius. But their affirming, the edifice came out of Africa into Spain, thence into Ireland, thence into Britain, and of its being erected here in the same form, by art magic; and that the stones are of a medicinal virtue: these notions lead us to the original truth, of the Druid founders, and that Stonehenge had originally, the name of Ambres, and from it the adjacent town of Ambresbury had its name.

To pursue this matter a little further. Between Stonehenge and the town, hanging over the river, upon elevated ground is a fine and ancient camp, commonly call'd Vespasian's, and not without much probability, attributed

to him. We have often had occasion to mention it before. That great man, destin'd by providence for executing his final vengeance, on the people of the Jews, and thereby accomplishing our Saviour's predictions; by his successes in this place, pav'd a road to the imperial dignity. Having conquer'd the isle of Wight, he pursued his good fortune, higher up into this country, where he made this camp, and another across the heath, call'd Yanesbury; which seems to retain the latter part of his name. The camp we are speaking of near Ambresbury, is an oblong square, nicely placed upon a flexure of the river, which closes one side and one end of it. There is an old barrow inclos'd in it, which, doubtless was one of those belonging to this plain, and to the temple of Stonehenge, before this camp was made. It is pretty to observe, that the road from Stonehenge to Ambresbury, runs upon the true *via prætoria* of the camp. The General's tent or *prætorium* was in that part south of the road, between it and the river, toward little Ambresbury. There is another gate of the camp, at the lower end, northward, the *porta prætoria ordinaria*, in the Roman language. Now I apprehend, that Stonehenge was originally call'd the Ambres, from thence this camp was call'd Ambresburgh, and thence the name of the town underneath.

Mr. Camden writes, "that near Pensans in Cornwall, is a very remarkable stone, call'd main Ambre, which tho' it be of a vast bigness, yet you may move it with one finger: notwithstanding a great number of men cannot remove it from its place. The name is interpreted the stone of Ambrosius." A picture of it in Norden's history of Cornwall, p. 48. I have seen one of these rocking stones, as call'd commonly, in Derbyshire. Mr. Toland in his history of the Druids, mentions it too, and says there are such in Wales and in Ireland, Sir Robert Sibbald mentions them in Scotland, all rightly judg'd to have been done by the Druids. Sir Robert speaking of the rocking stone near Balvaird (or the Bards town) in Fife: "I am inform'd (says he) that this stone was broken by the usurper Cromwell's soldiers. And it was discover'd then, that its motion was perform'd, by a yolk extuberant in the middle of the under surface of the uppermost stone which was inserted in a cavity, in the surface of the lower stone." This is the artifice of the stones at Stonehenge, but applied here by the Druids for a moveable principle, as there, for stability. I call them mortaise and tenon: and before observ'd them to be of an egg-like form; which Sir Robert calls a yolk. The Main Amber in Cornwall was likewise destroy'd in the civil wars, by one of Oliver's governors. These reformers had a notion of these works being superstitious matters. Main Ambre is lapis Ambrosius, or petra Ambrosia.



And that name leads us to consider the famous petræ Amhrosiæ, on the coins of the city of Tyre. A specimen of them, I have drawn on the Plate following.



These, and many more of the like sort, struck by the city of Tyre, in honour of their founder Hercules, may be seen in Vaillant's second Volume of colony coins, pag. 69, 148, 218, 251, 337.

They represent two great, rough stones, call'd petræ ambrosiæ, with an altar before them, and an olive tree; Hercules the hero of Tyre, the famous Navigator of antiquity, their founder, sacrificing. On some of the coins petræ ambrosiæ wrote in Greek. He is represented indeed like the Greek Hercules, but in the latter times of the Roman empire, when these coins were struck, they at Tyre were as far to seek about the true meaning and origin of their first antiquities, as we of ours. And what knowledge they had of them, was from legendary reports of the Greeks, who chiefly, among the heathens, had the knack of writing. These reports, as we may find in Nonnus his Dionysiacs, 40. and 41. acquaint us, that Hercules invented shipping, as a latin poet too intimates, Tibullus.

Prima ratem ventis credere docta Tyrus.

They acquaint us that he ordered Tyre to be built, where the petræ ambrosiæ stood, which were two moveable rocks, standing by an olive tree. He was to sacrifice on them, and they should become fixt and stable: rather, the City should be built with happy auspice, and become permanent.

Here are our Main Ambres, made artfully moveable, a kind of altars, or pillars, the same as the pillars of Hercules so fam'd, and as little unders-



tood. They were the original patriarchal altars, for libations and sacrifices, and mean, in general, their Altars, whether moveable or immoveable: or as we may speak, their temples, which imply an altar properly, inclosed with stones and a ditch, or ground dedicated and set apart for public celebration of religious rites. For the word Ambrosius means in general, consecrated, dedicated to religious use.

Beside the petræ ambrosiæ of Tyre, and our main ambres of Britain and Ireland, we meet with another in Hephæstion's History III. 3. "Speaking of Hercules, he mentions the Gygonian stone, as he calls it, near the ocean, which may be mov'd with the stalk of an asphodel, but can't be remov'd by any force." It seems this word Gygonius is purely Celtic. For gwingog signifies motitans, the rocking stone; and gwgon is what the boys with us call a gig, or little top. For these Gygonian stones are of that shape, pyramidal.

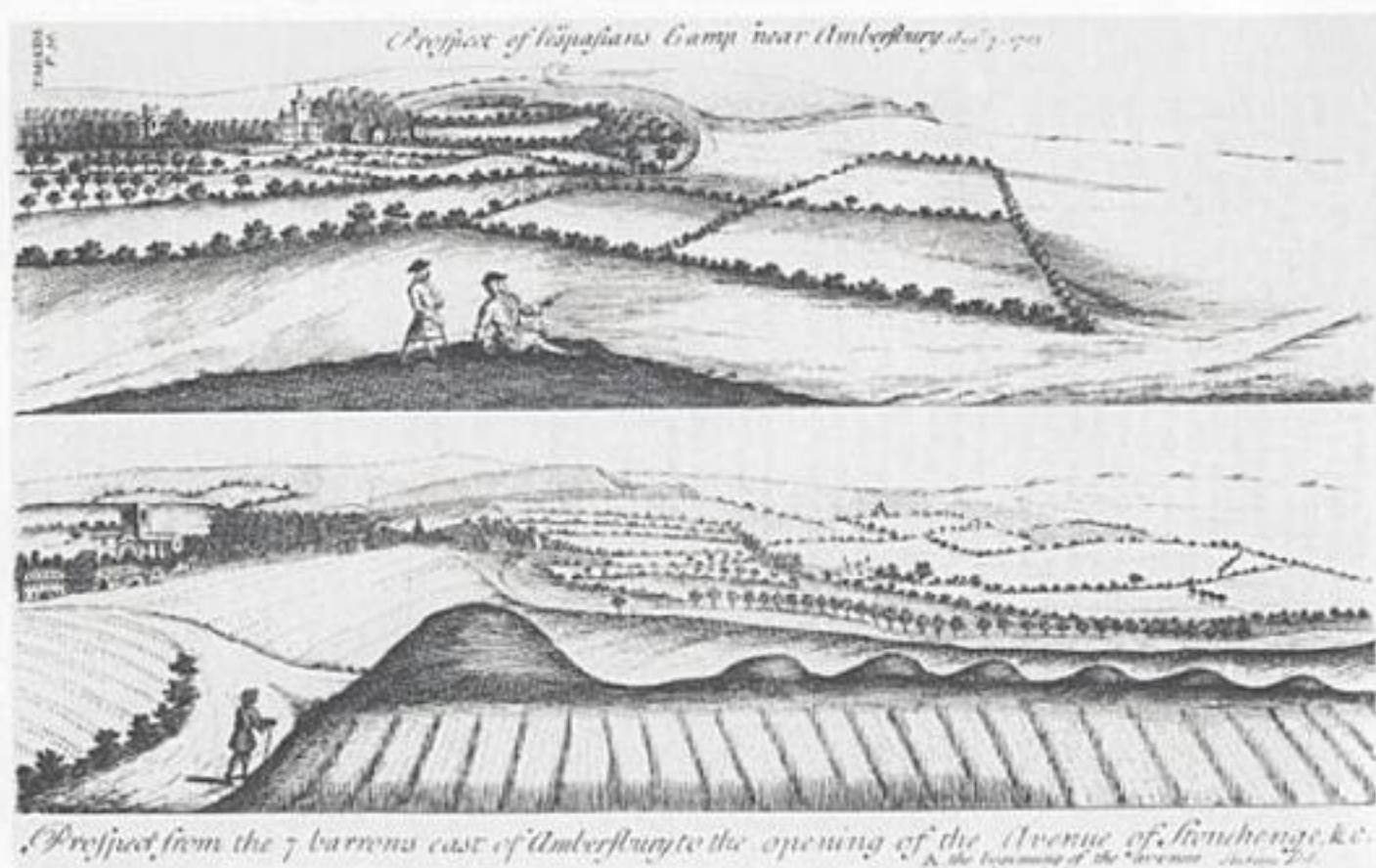


Plate 26. (above) Prospect of Vespasians Camp near Ambersbury. Aug. 7 1723
 (below) Prospect from the 7 barrows east of Ambersbury to the opening of the Avenue of Stonehenge, &c.
 A. the beginning of the avenue.

No wonder these matters are well nigh lost, in the mist of extreme antiquity, when even the meaning of the word ambrosius was hardly known, either to the antients or moderns, till Mr. Baxter discover'd it, in his



glossary. It signifies oil of roses, rosaceum: the most antient kind of perfume. In the 4th Odyssy, v. 445. Edothea a sea goddess, teaches Menelaus and his companions, to cure the odious smell of the sea calves.

Αμβροσίῳ ὑπο ῥίνα ἐχάστω δῆκε φέροντα
 Ἡδύμᾶλα πνείσαν. —————

She put ambrosia to their noses, sweetly smelling. Again, in his hymn to Venus, the graces washt the goddess, and anointed her with oil ambrosial: such as becomes the immortals.

————— ἣ χεῖσαν ἐλαίῳ
 Αμβρότα, οἷα θεὸς ἐπενλώσθην αἰὲν ἔντας.

Lastly, in Iliad. XXIII. Venus anoints Hector's body with ambrosial oil of roses,

————— ῥοδόεντι ᾧ χεῖει ἐλαίῳ
 Αμβροσίῳ —————

Which is a tautology. For from length of time, they scarce knew the true meaning of the word in Homer's age.

Virgil seems to understand but somewhat of the original meaning of the word, speaking of Venus; her hair was anointed with ointment perfum'd.

Ambrosiæq[ue]; comæ divinum vertice odorem

Spiravere ----- Æneid.

In Pliny Nat. Hist. XIII. 1. we find the oleum rhodinum most antient, common and simple. And this is the true ambrosia, which from its very antient use in sacred rites, had almost lost its meaning; and was us'd to signify, one while, the food of the gods, another time, immortality; again,

whatever is divine, or appropriate to the gods. But simply, it signifies oil of roses, still from its first use, in sacred matters, it imports anointed, in a religious sense; consecrated, dedicated. Then main ambres, ambres, petræ ambrosiæ, signify the stones anointed with holy oil, consecrated; or in a general sense a temple, altar, or place of worship.

The truth is, it was a patriarchal custom to consecrate their altars, pillars, or in a general word temples, by anointing with oil, either simple or perfum'd. Rose oil being the oldest, engross'd the general name of the action; so that a stone anointed with oil of roses, is a main amber, or lapis ambrosius. The same is an altar, or stone dedicate to religious use. The plural number, petræ ambrosiæ, import a church or temple, in our way of speaking.

We have an illustrious instance of this practice in the holy Scriptures, and the earliest. Gen. xxviii. This is not commonly understood by writers. 'Tis the moving and memorable history of young Jacob, sent away from his father's house alone, to take a long journey to some unknown relations. He came to a place, call'd afterward Bethel, and sleeping with his head on a stone for a pillow, had a celestial vision; and a promise from God, of the highest importance to him and all mankind. Awaking, he thought the place had been holy ground, where, perhaps, his grandfather Abraham had before-time built an altar; an house of God, or gate of heaven, as he elegantly names it. "Therefore he rose up early in the morning, which was one circumstance (in patriarchal times) of the work he was going about, and took the stone that he had put for his pillow, and set it up for a pillar; and poured oil upon the top of it, and called the place Beth-el, i.e. the house of God. Then he vowed, that if God would please to prosper him in his journey, and bring him back into his own country, he would build a temple there, and consecrate to God the tythe of his substance, as was the manner in those times."

This is in reality a votive, patriarchal temple, altar or house of God, which he not only vows to build, but at the same time endows it. The stone which Jacob anointed, was not an altar properly, lying on the ground whereon to make a libation, but he set it up as a pillar. It was one of the upright stones, which the scripture calls pillars, as standing of itself; a part of the circle of stones, inclosing the altar. And by the act of anointing, Jacob consecrated it, as the manner then was, defined it for a sacred purpose, as an earnest of his will in good time to fulfil it. And this he did fulfil, chap. xxxv. building the



celebrated temple of Bethel. Here Jeroboam set up one of his golden calves. At last it was destroy'd by Vespasian.

In Exod. xxiv. 4. "we have an instance of Moses rising up early in the morning and building an altar, and setting up 12 pillars around it." This was before the tabernacle was made, which introduced the custom of cover'd temples.

But so famous was that patriarchal temple of Jacob's, which he built at Bethel; that the heathen called all their temples of that sort, when they were perverted to idolatrous purposes, *Bæthylia*, *lapides Bætyli*, and the like. Which indeed is but another manner of expressing *lapis Ambrosius*, or our *Main Ambre*. And according to custom, the fabulous Greeks having lost the true history of its origin, affix'd many strange stories to it; as of Saturn devouring such a stone, wrapt up in a skin, instead of his Son Jupiter: which seems to be form'd from the memory of praying at these places, in the name of the mediatorial deity, as the patriarchs did. And Sanchoniathon tells us, the god Ouranus deviled *Bætylia*, or animated stones. He means our rocking stones, *gygonian* stones. I shall show in my discourse on that subject, that by Ouranus, he means righteous Noah, who, according to patriarchal usage, builded an altar unto Jehovah, Gen. viii. 20. meaning one of these patriarchal temples. In time, by the corruption of mankind, these places were desecrated to idolatrous purposes; and writers pervert the intent of them. So that God Almighty, raising up the Mosaic Dispensation, was oblig'd to interdict the very use and practice of these open temples, and introduce the cover'd one of the tabernacle; by way of opposition to heathenism, as well as with other important views.

We find now the meaning of anointed stones in antiquity, and the olive-tree set by the stones on the Tyrian coins. As the very learned Author of *Archæologia Græca* observes, on the affair of consecration, "they were more or less sumptuous and expensive, as other parts of divine worship, according to the ability of the worshippers." Young Jacob a traveller us'd plain oil, part of his viaticum, others us'd perfum'd oil, or ambrosia. That author cites us from Athenæus, the method of consecrating Jupiter Ctestias's statue with a libation call'd ambrosia: and others by anointing with oil, prayers and libations, Exodus xxx. 22. We have the holy precious ointment made under the Jewish dispensation for the like purpose. And we use such, for inauguration of our kings, to this day.

The Tyrian Hercules who built Tyre and set up the petræ Ambrosiæ in those coins, (if I mistake not) liv'd as early as the time, of Jacob's anointing the stone at Bethel. The great Bochart, who penetrated very deep into the Phœnician learning, looks upon it as a clear matter, that in Joshua's time, the Phœnicians sent innumerable colonies, into the mediterranean coasts, and even to the ocean. In the preface to his admirable work Canaan, he says, "he has a great suspicion, that colonies went abroad this way, before that time. Particularly, he asserts, that Hercules, in Eusebius surnamed Desanaus, who was famous in Phœnicia before the Exodus, is the same, who conquer'd Antæus in Africa: which in Eusebius, is set 56 years before. He is call'd Hercules primus, and that is 63 years before the Exodus, in Eusebius's chronology." Again, he judges it to be 2000 years distance between the later Roman times and the first Hercules. Now from Constantine the great, 2000 years carries us up to Jacob's time. And he proves, from Aristotle de mirabilibus, that Hercules built Utica in Africa, at that time; wherein Eusebius says he was famous in Phœnicia, and this must be when Hercules was old. He having conquer'd Antæus in that country, when he was young.

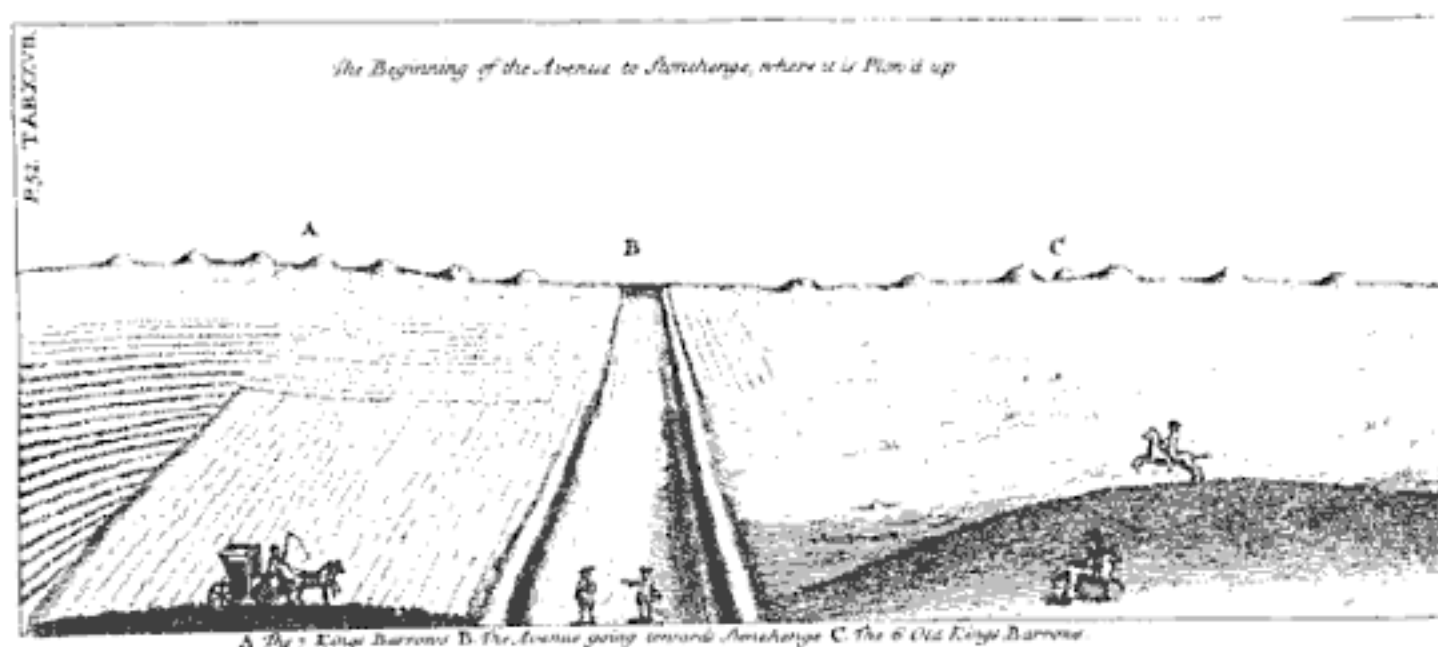


Plate 27. The Beginning of the Avenue to Stonehenge, where it is Plow'd up.
A. The 7 Kings Barrows. B. The Avenue going towards Stonehenge. C. The 6 Old Barrows.

But I find in the same Eusebius, Prometheus is set 111 years still earlier, before the first mention of Hercules, this is during the life of the patriarch Joseph. Prometheus and Atlas were brothers, and students in Astronomy, with whom the story of Hercules is always conjoin'd. And so high at least, I must place the time of our Tyrian Hercules, who is the same as Desanaus. But Marianus transcribing Eusebius calls him Doseaus. And Hesychius says

Dorsanes is a name of Hercules, with the Indians. But by the Indians, it is likely, the Phœnicians and Arabians are meant; for the ancient Greeks call all the country to the east of the mediterranean sea, India. And then we may in some measure understand the report of Ammianus Marcellinus, who takes it from Timagenes, an old Greek Historian, but a Syrian by nation, speaking concerning the peopling of Gaul, "that the more ancient Hercules conducted the Dorienses, to the countries bordering on the ocean." Perhaps the Dosareni are meant, an Arabian nation, mention'd by Ptolemy. A Deity of the Arabians was called Dusaris or Dosaris, mention'd by Step. Byzant, Suidas and Tertullian. A difficult word, which Bochart cannot trace from the Arabian language; nor is it easy to say, what Deity he was. No wonder such matters are obscur'd, thro' so long distance of time. Some think him Bacchus, some Mars, and why not Hercules? for after mankind laps'd into idolatry, these three were much confounded.

I find sufficient testimony, of the Tyrian Hercules coming from Arabia, about the red sea, or having companions, that were natives of that country. For this reason they nam'd an island at the city of Gadis, which they built, Erythia, Erythræa; which Pliny IV. 22. says, was so called from the first possessors, the Tyrians, who came from the Erythræan sea: which is the red sea. Solinus says the same. That sea had its name from Erythras, as the Greeks and the same Pliny write; who is Edom or Esau, brother of Jacob. The words are synonymous, signifying red. The reports of Hercules's expedition to that island Erythræa, now Cadiz, is famous in all the old Greek writers.

This relation we have given of the Tyrian Hercules, that he lived about the time of Abraham, or soon after, according to Eusebius's chronology; that he came from about the red sea, and had companions in his travels, that lived thereabouts, is much confirm'd by what Josephus writes, from Alexander Polyhistor; who cites it from a very ancient author, called Cleodemus, surnam'd Malchus, who wrote a history of the Jews, agreeable with the Mosaic. He says, Abraham had several Sons by Keturah, he names Apher, Suris and Japhra. That Apher and Japhra were auxiliaries to Hercules, when he fought in Lybia against Antæus. That from Apher the country was nam'd Africa. That Hercules married his daughter, and begat of her Dodorus. Josephus in the same chap. of the first book of his antiquities, writes, that Abraham had six sons born of Keturah: men, heroic and wise. That they and their posterity were settled in Troglodytis, in the country of Arabia foelix, reaching to the red sea. He makes Opher or Apher grandson to Abraham,

by Midian his son. That Apher waged war in Lybia and conquer'd it, and plac'd his sons there, who call'd the Country Africa from their father, So Schindler in his lexicon, pag. 1361.

Making proper allowance for relations of such very antient matters, transmitted by historians of different countries, different languages, and so often transcribed and translated, before they come down to us; here is enough to confirm and explain, what we have before advanc'd: both as to time and place, and matter. And we cannot but see what relation our Main Ambres and the gygonian stone by the ocean, have to the petræ ambrosiæ, which Hercules set up at Tyre: which is the drift of my discourse. That very gygonian stone, for ought I see, may be our rocking-stone near Pensans, it stands by the sea-side. Nor do I see any absurdity, if we judge, that it was erected there, by Hercules in person. Near it is that other famous Druid temple call'd Biscawoon, consisting of 19 pillars in a circle and a central kebla. The entrance is made of 2 somewhat large stones, than the rest: not improbably one of the Herculean labours. It is affirm'd by the best authors, that our Tyrian Hercules, the more ancienter Hercules, built the city of Gadis, at Cadiz now. And where-ever Hercules came, there we read of his pillars. Thus Avienus.

Hic Gadir urbs est, dicta Tartessus prius,
Hic sunt columnæ pertinacis Hercules.

Arrian II. of the life of Alexander, remarks, "that Gadis was built by the Phœnicians. There was a temple of Hercules. The form, the sacrifices and ceremonies there perform'd, are all after the Phœnician manner." Strabo in his Lib. III. says there were two pillars in this temple, dedicate to Hercules; which the learned Tristan in his commentaries on medals, p. 384. says, he doubts not, but they were petræ ambrosiæ, in imitation of those of the same name, in the temple of Hercules of Tyre, which Herodotus in Euterpe speaks of. He appears to have been an extraordinary genius, and a man of great piety withal. Therefore where-ever he came, he made these patriarchal temples, or set up pillars of stone, as antiquity called them. Just as the patriarchal family did in the land of Canaan. And Hercules seems to me, to have been a great man, raised up by providence, to carry the reform'd patriarchal religion, to the extremest part of the then known western world. Here, I suppose, the religion of Abraham remain'd pure, for many ages, under the Druids, till perhaps corrupted by incursions from the continent. It is remarkable, that the Romans, who were so catholic,

(different from those we now absurdly call Roman catholics) as to permit all religions, persecuted only that of the Druids, and the christian: whence we are naturally led to think, there was a good deal of resemblance. Indeed, the Druids are accused of human sacrifices. They crucified a man and burnt him on the altar; which seems to be a most extravagant act of superstition, deriv'd from some extraordinary notices they had of mankind's redemption: and perhaps from Abraham's example misunderstood. But as to human sacrifices simply considered, the Romans themselves and all other nations upon earth at times, practis'd them.

To this Hercules, antiquity affixed very many names, from different notions of him, retain'd in different countries; and after idolatry took root, he was worshipp'd under those names of consecration, according to the old method. For instance, one of his names was Palæmon. Palæmon, says Hesychius, is Hercules. The Greeks made him a sea Deity, who had been so great a sea-captain. They call him Melicerta, which is his Phœnician name Melcartus, king of the city. Ovid tells us the story in Met. IV. Nonnus calls him Afrochiton starry-robed, from his being made a constellation in heaven. In the Gallic picture of him, which Lucian saw, he is represented with a sphere in one hand, under the name of Ogmios. Mr. Toland in his history of the Druids, shews us the true interpretation of that word, from the Irish language; after the learned had in vain attempted the explication of it. From thence we infer he brought the use of letters hither. Cæsar informs us, the Druids had them.



Plate 28. A direct View of Stonehenge from the union of the two Avenues.
A. the wing of the avenue going to Radfin. B. to the Cursus.

He is called Assis, by the easterns, which signifies the valiant: the same as Hæsus of the Germans.

Beside the patriarchal custom of building these places of worship, and consecrating them with oil, we find many other footsteps of that most ancient religion, in the history of Hercules. Silius speaking of the strange rites used in the Gaditan temple of Hercules, says, the priests officiated there barefooted, prais'd chastity, had no statues, us'd white linen surplices. And it is a notorious custom with the ancient Phœnicians, to pay tithe. Indeed they paid tythe to Hercules. Which only imports, that it was a precept and practice introduc'd by Hercules. And after they had deified Hercules they practis'd it toward him. This was a common method, when idolatry began. I shall treat more largely of these affairs; when I discourse expressly of the patriarchal religion. Likewise, I shall prove more fully, from chronological characters, that this Hercules liv'd at the time, we are speaking of, in the canon *Mosaicæ chronologiæ*. What I now recite, concerning these matters, I could not well avoid, as they in my apprehension. relate to the name of Stonehenge.

Pliny Nat. Hist. VII. 56. gives us a testimony, of our Hercules, under the name of Melcartus, (as Bochart rightly corrects it) first bringing tin into Greece, from the Cassiterid islands. By which the British are meant. The tin of Tyre, which the merchants of Greece, came to buy, at the fairs of that city, is mention'd Ezekiel xxvii. 12. which, no doubt, came from hence. But it is much earlier mention'd, among lead and other metals, when the Midianites had it in Moses's time, Numbers xxxi. 22. the Chaldee and Arabic version there, use the word *kastira*, the Hierosolymitan *kistara*. No wonder the Midianites should then abound with tin: when we were told by Josephus, that Apher son of Midian, was one of Hercules's companions. The LXX. in that passage of Numbers call it *κασσίτερος*. But tin is mention'd earlier still, in Job xix. 24. and Job liv'd in this same country, on the borders of Arabia.

It is very evident from Bochart, that the Phœnicians, had sail'd quite round Britain, by what he writes of Thule. How then can we doubt but the great island, which they found in the extremest west, was Britain? but they kept their gainful navigation hither so secret, for many centuries, that even Herodotus the earliest Greek writer professes he knows not, whence the tin comes. Britain was the only country, where it could come from, in any quantity, as Pliny says. But from this great secrecy of the Phœnicians, we

have lost the high antiquities of Britain, as unknown to the Greeks; the only heathen nation that had the address to commit things to writing. Therefore we must be content with what small remains of this kind, can be fish'd out of the wreck of time, by such conjectural methods, as antiquaries cannot avoid insisting on.

In Devonshire is Hartland point so call'd corruptly, as the excellent Camden observes, for *Herculis promontorium*. And upon the Durham sea coast is a town on a promontory call'd Hartlepool. A village call'd Hart near it. I take it to have been call'd by the Greek traders here *Heracleopolis*. And hence, probably came that fine old altar in Greek, dedicated to the Tyrian Hercules, which Mr. Roger Gale and I copied, in Corbridge church-yard.

From these and many other considerations of this kind, which I shall hereafter treat of more largely and professedly: I cannot but join in opinion with Franc. Philelphus in his epistles, and Lilius Giraldus in his Hercules mention'd by Mr. Camden, in the last quoted passage, and with many other writers, that the very ancient Phœnician or Tyrian Hercules conducted an eastern colony hither, upon the aborigines; with whom came the Druids, the builders of Stonehenge and the like works among us. And let this suffice for what I promis'd upon the first head of this chapter, viz. to speak of the antiquity of these works in general. 2. We are to speak of the time of founding Stonehenge.

CHAPTER XII.

A conjecture about the time of the founding of Stonehenge. An uniform variation in setting these works, not to be accounted for, but by supposing the Druids us'd a magnetical compass. Their leader, the Tyrian Hercules, was possess'd of a compass-box. The oracle of Jupiter Ammon had a compass-box. The golden fleece at Colchis was a compass-box. Both these temples were founded by Apher, Hercules his companion, and grandson to Abraham. Apher, Aphricus, or Phryxus the same person, seems to have given name to Britain. The Druids set their temples and other works by it. The history of the mariner's compass, since that time. The history of the variation of the magnetic needle. A conjecture of the time of building Stonehenge, from thence.

IN my Enquiries into these works of the antient Druids in our island, I observed a greater exactness in placing them, with regard to the quarters of the heavens, than one would expect, in works seemingly so rude; and in so remote an age, to which we must necessarily refer them. What more particularly mov'd my attention, was a certain variation from cardinal points, which I observed regular and uniform, in the works of one place. And that variation was different, in works of another place; yet equally regular and uniform in that place. Suppose (for instance) the works about Abury in Wiltshire generally vary 9 or 10 degrees to the left hand, from cardinal points: i.e. westward from the north. And the works at Stonehenge generally vary to the right hand, from cardinal points, and that to the quantity of 6 or 7 degrees. The principal diameter or groundline of Stonehenge, leading from the entrance, up the middle of the temple, to the high altar, (from which line the whole work is form'd) varies about that quantity southward of the north east point. The intent of the founders of Stonehenge, was to set the entrance full north east, being the point where the sun rises, or nearly, at the summer solstice. As well because that is the farthest elongation of the great celestial luminary, northward; the complement of our earthly felicity, in ripening the fruits of the earth: as because then they celebrated one of their principal religious meetings or festivals, with sacrifices, publick games, and the like. Such was the custom of all the antient nations. The Isthmian, Nemæan, Olympian, Pythian games, famous in the works of the learned nations: those of Tyre II.

Maccabees iv. 18. dedicated to their and our founder, the antient Tyrian Hercules, who, I suppose, conducted the first Phœnician colony, with our Druids, into Britain: these were all held at this time of the year. A custom continu'd from patriarchal times.

This exactness with which the Druids set their works, and the uniformity of their variation, make me believe, this variation was not the effect of chance or negligence.

By a superficial reflexion upon it, we should be apt to suspect, it was owing to their observing the sun's rising on the longest day of the year, or summer solstice, and setting their line by it. For this is supposed to be a method by which they formerly set our Churches: marking the sun's rising at the equinox. But the Druids were too good astronomers and mathematicians to need so mean an artifice: nor does it correspond to the quantity precisely enough. Besides, this same variation appears where it cannot possibly regard the sun's rising at that

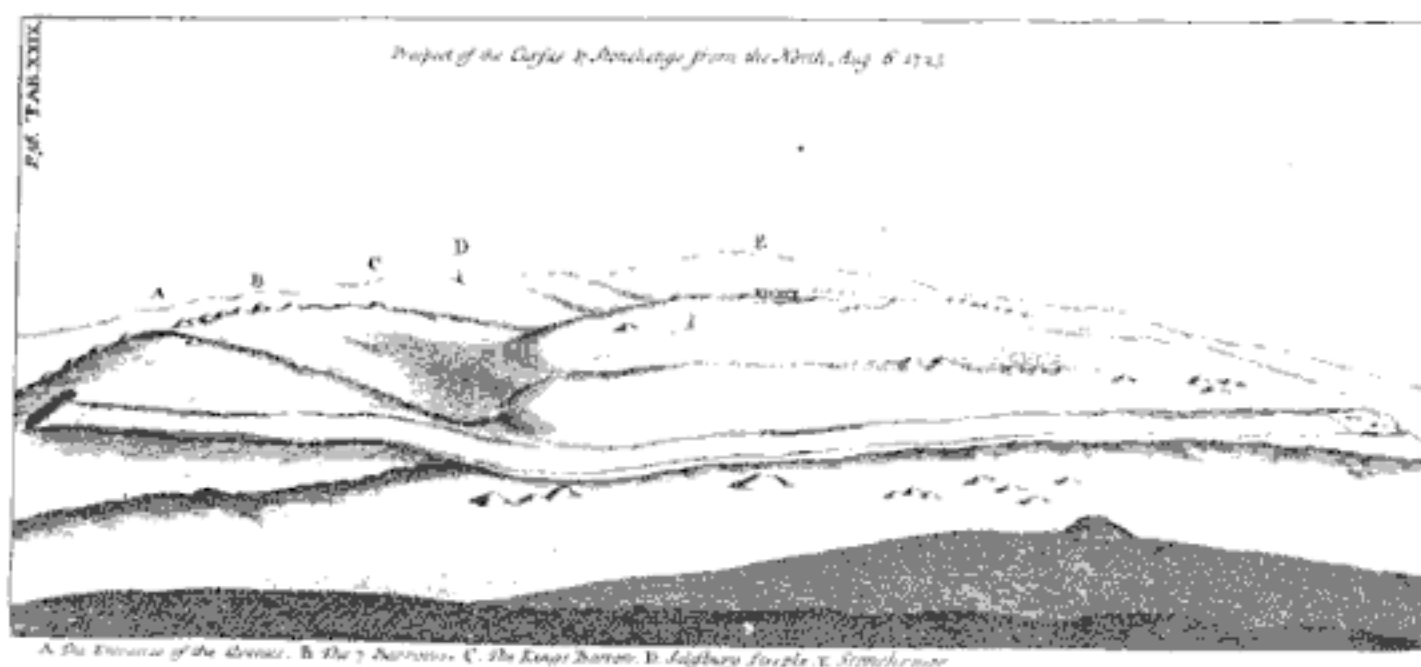


Plate 29. Prospect of the Cursus & Stonehenge from the North Aug. 6, 1723.
A. The Entrance of the Avenue. B. The 7 Barrows. C. The Kings Barrow. D. Salisbury Steeple. E. Stonehenge.

For, I observ'd the like variation, or very near, in all the other parts relating to this temple before taken notice of; beside the avenue leading up to the temple from the north east, in a strait line; which has the before-mention'd variation all the way. At the bottom of the hill, this avenue divides into two wings, each going off from the list mention'd part, with a decent sweep; the one to the left hand, westward, the other to the right hand, eastward.

They go off with a like angle, and that angle varies the like quantity. The western wing goes to the cursus, before observ'd, the place upon the downs, half a mile off Stonehenge, made for races with chariots and horses. The right hand wing of the avenue runs directly eastward for a mile together, pointing to a place on an angle of the river, called Radfin. This part of the avenue, which was intended by the founders, to have been drawn precisely east and west, varies about 5 or 6 degrees to the south.

Likewise, that great work of the cursus itself, which stretches its length across the downs, from east to west, like a line of latitude upon the globe, varies such a like quantity, from true east and west, the same way. The meridian line of Stonehenge passes exactly through the middle of this cursus.

Further, at the east end of this cursus, the huge bank of earth, above 200 foot long, made across the end of the cursus, as a meta, and whereon sat the princes and judges of the prizes: This bank of earth is drawn exactly at a right angle with the cursus, consequently due north and south, but with the variation before spoken of. These, and other like observations here, as well as in other Druid Works, appear'd to me no otherwise to be accounted for, but that the Druids us'd a magnetical compass, in laying down the works: and that the needle vary'd so much, at that time, from the true meridian line.

I remember I open'd this affair, near 20 Years ago, to Dr. Halley, who was of the same sentiment. Nor am I the first who suspected the Phœnicians of old were possessed of this great secret, as well as the Chinese, from times immemorial. I am not moved to think otherwise by what Bochart writes against it. The very name of the magnet lapis Heraclius strongly suggests, the Tyrian navigator before-mention'd knew it, as is well argued by Fuller in his *Miscellanies*, IV. 19. And many things occur, in the mythology of the antients, wherein (if I mistake not) I discern most evident traces of this knowledge of the directive power of the magnet. We are not to despise the fables of the antients, but to make the best use of them, and search out for their latent truths. My predecessor Cumberland, observes in *Sanchoniathon*, p. 325. "that Apollodorus (for instance) hath many truths in his mythic history, deriv'd from the tradition of Phœnician, and Egyptians, planting Athens." And the Greeks, those happy practitioners in writing, as well as other arts, took the unlucky turn of the marvellous, to so exorbitant a degree, as to write nothing without it. In Apollodorus, put out by the

learned Dr. Gale, p. 114. we have an account of the 10th labour of Hercules, his conquest of Cadiz, or Gadir, as then call'd, or Erythea. We are told, the hero set up the 2 pillars at the Streights mouth, at Gibraltar, or then Tartessus; which we may reasonably suppose some temple made of these rough stones, or some main ambres, like those we mention'd before, the *petræ ambrosiæ* in the Tyrian coins. Then, "says our author, going on his journey, the rays of the sun were so vehement upon him, that he hid the boldness to draw his bow against him. The god admiring the intrepidity of the man, gave him a golden cup with which he sail'd over the ocean." Pisander in his Ild. book, (in Atheneus Deipnos. XI.) writes the same, only that Oceanus lent him the cup. Panyasis in his I. of the history of Hercules, says, he begg'd it of Nereus, son of Sol, and with it sail'd to Erythea. (Macrob. Saturn. XXI. 5.) Theoclytus, in Atheneus aforesaid, in his II. de tempest. mentions the same thing. He said it before in his Titanomachia. Pherecydes, in his III. of history, quoted both in Atheneus and Macrobius, tells a story somewhat like that of Apollodorus, but more particular. Servius *Æn.* VII, mentions it, but as some of the former, makes the cup of brass, instead of gold. Alexander Ephesius the like. All very antient writers. Lucian says, that Hercules sail'd in a sea-conch shell. What can we understand by all this, mention'd by so many grave authors, but a compass-box, which enabled him to sail the great ocean, and penetrate to our northern island, less obnoxious to the suns vehement heat? Add to this, in the same place, Apollodorus speaks of his fighting Albion and Dercynus, by Mela, called Bergion, Sons of Neptune; which were the most antient names of the Britannic Isles, before the name of Britain. Diodorus Siculus, in his IV. book delivers a like account of this 10th labour of Hercules, but in a mere historical manner. And adds, that when he return'd by Sicily, he dedicated a grove to Geryon the hero, where, to his time, the people did religious rites. For this affair of sacred groves, we know our Druids were famous. He built a temple likewise at Gades. We are not to suppose it a cover'd edifice, like what posterity call'd a temple, but an open one, according to the mode of those days. Cover'd temples, at that time, being a thing unknown in the world. Afterward, a magnificent temple, properly, was there built to him. Mela witnesses, that it was our Egyptian Hercules, who was there worshipped. For I suppose our Egyptian and the Tyrian Hercules to be all one. The same mention'd by the name of Assis, in Manethons XVII. Dynasty, in Josephus c. App. in Africanus, Eusebius, and Syncellus. Apollonius II. 14. writes, it was not the Theban but the Egyptian Hercules that came to Gades: which is confirm'd by Hecateus. And Herodotus, in Euterpe says, Hercules is a very antient deity among the Egyptians, not so,

among the Greeks. And I suppose this hero lived at, or very near the time of the patriarch Abraham.

These were the times about the beginning of idolatry. And Hercules was far from being an idolater himself, though worshipp'd afterwards, for his great exploits, and perhaps on this very account of his inventing or knowing the use of the compass. This is the Hercules kneeling on one knee, a constellation in heaven, taken notice of by Dionysius Halycarn. by Tzetzes, Hyginus, Æschylus and others. It seems to indicate his piety; for which the astronomers his disciples plac'd him in the heavens. He kneels upon the arctic circle, and supports the zodiac on his shoulders; tho' this is not understood by the painting on our modern globes. The Phœnicians, his successors in the tin trade of Britain, kept the trade and the very name of the Island as a great secret; as well as the use of the compass, till it was lost with them. But it seems highly probable, because Lucian describes Hercules with a sphere in his hand, that he affixed the present Asterisms of the zodiac: and his successors, the Phœnicians, propagated them.

'Tis next to our present purpose, to consider that famous oracle of Jupiter Ammon in Africa, to be referr'd to the most early times of idolatry: render'd illustrious by Alexander the Great taking a journey to it. Which gives us the opportunity of knowing somewhat of it.

Quamvis Æthiopum populis, Arabumq; beatis
Gentibus, ac Indis, unus sit Jupiter Ammon. Lucan.

All these nations, with Egypt and Africa, were peopled by the posterity chiefly of Ham. They were the first that fell into idolatry, and worshipped their common progenitor, call'd Amyrus, in Sanchoniathon. Hecateus says, Amoûn, as the Egyptians write it, is the word of those that invoke god, and that they meant somewhat very mysterious by it. The history of its origin is this. Bacchus, the hero, or demigod, travelling through the sandy desarts of Africa, with a great army, was perishing with thirst; he pray'd to his father Jupiter for relief, who sent a ram that show'd him a spring, sav'd him and his host. Out of gratitude, the hero builds a temple there, to the deity who thus aided him under the form of a ram. There is no room to doubt, that this is in part copied from the transaction of the children of Israel, in the Arabian wilderness. They have added to it, a name and notion borrowed from patriarchal tradition, of a divine person, symboliz'd by a ram; horned, anointed, which is all one. We christians mean Messiah. Innumerable

passages in old authors, which I might cite, innumerable monuments of antiquity in sculpture, shew, that Jupiter Ammon was figur'd as a ram, with a ram's head, with rams horns. They applied the patriarchal notion of the Messiah, to their progenitor Ham, in an idolatrous way: and deified him under that character. There is a very remarkable passage in Herodotus, which, it is worth our while, to transcribe.



Plate 30. Prospect from the west end of the Cursus of Stonehenge
A. the eastern meta. B. the eastern wing of the avenue. C. Stonehenge.

In Euterpe cap. 42. that author tells us, why the Theban Egyptians pay so great a regard to the sheep. "Hercules on his importunity to Jupiter, that he might have the honour personally to see him, at length prevail'd. And the god consented to exhibit himself to his view, under this device. viz. Jupiter cut off a ram's head, put the skin over his own head, and thus appear'd to Hercules. Whence the Egyptians made the statue of Jupiter, with a ram's head, and call Jupiter Ammôun. Whence they hold sheep for sacred animals, never kill them but once a year, upon the festival day of Jupiter, when only one ram is sacrificed, and his head put upon the statue of Jupiter; all that are there present, beat the ram, and at last he is buried in a sacred urn."

It is impossible not to see, that this is derived from that history recorded, Exodus xxxiii. Moses desires of Jehovah repeatedly, that he might see him. He calls it seeing his glory. He is answer'd at length. "I will make all my

goodness pass before thee, and I will proclaim the name of Jehovah before thee. Thou canst not see my face, but I will put thee in a cleft of the rock, and cover thee with my hand, whilst I pass by. Thou shalt see my back parts only." Here he notoriously promises Moses, that he shall see him, in a symbolical form. In the next chapter, Jehovah descended in the luminous cloud, or Shechinah, and proclaimed the name of Jehovah; recites those attributes that relate to his dealings with mankind, in the strongest point of light; "his goodness and mercy, and long-suffering, forgiving iniquity, transgression and sin: but adds, he will by no means clear the guilty, but visit the fathers iniquity upon the children." Wherein our original and fatal transgression is sufficiently intimated, and that God's justice is equal to his mercy; and the necessity of a divine redemption by sacrifice, which in scripture language is call'd, "the lamb slain from the foundation of the world."

All this the most ancient nations had a knowledge of, from patriarchal tradition. When they laps'd into idolatry, they applied these good notions to their new idolatry, and made statues from the symbolical and figurative forms of speech, us'd in true religion. Their sacrificing the ram on the festival day of Jupiter, their beating the ram, putting his head on the statue of their deity, burying him in a sacred urn: all most evidently pointing out the notions they had, in the most early times, of the suffering statue of the Messiah. And such was the origin, in short, of Jupiter Ammon. But it appears, by what learned authors write, on Curtius's description of his statue, that a magnetical compass box made one considerable part of his sacreds. This we read in Hyde Pers. relig. p. 495. in Curtius publish'd by Pitiscus, and by Rader the jesuite, and Schottus in Ortelius, by Fuller, Herwart and others. "This compass box with the statue of the deity, was set in a golden ship (the golden cup of Hercules) and carried in procession on the shoulders of the priests, accompanied by women singing an hymn in their own language." I doubt not, but the circumstance of carrying this golden ship, on the shoulders of the priests, is an imitation of the Mosaic ark in the march of the Israelites, thro' the wilderness, during their forty years pilgrimage. Tho' they mistook the reason of the thing; the Jewish church then being in a military and travelling state. But where the camp rested, the ark was repositied, in the adytum of the tabernacle: so likewise when in possession of the land of Canaan. This is sufficient proof, that the Lybians herein, copied after the Israelites, not vice versa, as our moderns are willing to think, in these cases.

Curtius tells us, the habit of Ammon's statue was made of Smaragd and other precious stones, wrought in Mosaic work. Which I take to be too, in imitation of the pontifical attire, under Moses's administration: particularly of the sacred, oracular pectoral, made of Mosaic work, with gems. I apprehend, that beside the statue of Ammon, there was a figure of (the upper part at least of) a ram, on the compass box: which was the oracle. And it is easy to guess how this may be managed for the purpose; even beyond the trick of Januarius's blood, and other Popish devices.

Hence we may better understand the famous golden fleece, which occasioned the Argonautic expedition, one of the earliest and most memorable *Æra*'s of the Grecian history. If we suppose this golden fleece to be a compass box, we see the reason why the choice youth of Greece set out upon that voyage: which, as all other matters of ancient history, among the Greeks, is so unaccountably puft [i.e. puffed--JBH] up with the leaven of fable. It became navigators to run any hazard for such a treasure. If we enquire into its origin, it is thus. Phrixus son of Athamas and Nepheles (according to the Greeks) had a ship given him by his mother. The ship is call'd in the fable a golden ram, or the ram with a golden fleece (the same thing as Hercules's golden cup.) In this, he and his sister Helle, flying the ill-usage of their mother-in-law Ino, sail away by sea. Helle affrighted in the voyage, falls overboard and gives name to the Hellespont. Phrixus continues the voyage, and goes to *Æetes* king of Colchis, where he hangs up his golden ram in the temple, to Jupiter Phyxius, (one would be apt to imagine they meant Pyxius, alluding to the box.) Jason made his far-fam'd expedition thither afterward, and stole it. But the ram was placed in the heavens, among the constellations, as a memorial; the first sign in the Zodiac: which shews the high antiquity of the story.

This account manifestly pretends very great antiquity, and some signal event. I observe this Ino their mother-in-law, is said to be the nurse of Bacchus, and throwing herself with her son Melicerte into the sea, became a goddess, under the name of Leucothea. Her son became a god, under the name of Palæmon. This Melicerte is allowed by all the learned, to be no other than our Melcartus above-mention'd. Palæmon is Hercules, says Hesychius. Palæmon is his name of deification. Pausanias in the beginning of his *corinthiaca* informs us, this apotheosis of Ina and Melicerta was the occasion of founding the famous Isthmian games. Plutarch says the same, and Phavorinus. Again, I observe, Phrixus is said to be son of Nephele (a cloud) whence call'd nubigena by Columella. We must hence expect

somewhat very secret and obscure. Further, all writers say openly this ram or ship of Phrixus was oracular and could speak upon occasion. So all the writers of the Argonautics too will have the ship Argos to be loquacious and oracular. Magnes another name of the load-stone is often call'd Adamas, which seems to be no other than Athamas. Apollodorus makes Magnes the son of Æolus, who marrying Nais, inhabited the isle Seriphus. Æolus was a great sailor, invented sails, and studied the winds, therefore deified and made the god of the winds. I suppose it all ends in the mysterious envelopement of the knowledge of the magnetic compass.

I hope for the readers candour, in reciting thus much from antient fable, which I did as concisely as possible. But in matters of obscure antiquity, we must make use of all helps. And in heathen antiquity we have no other. A strictly historical way of writing in former times, is only to be expected in the sacred canon of the Jews. And what is remarkable, after God's holy spirit had deserted them, their writers became the greatest fablers in the world, and, if possible, out-did the Greeks, in that way.

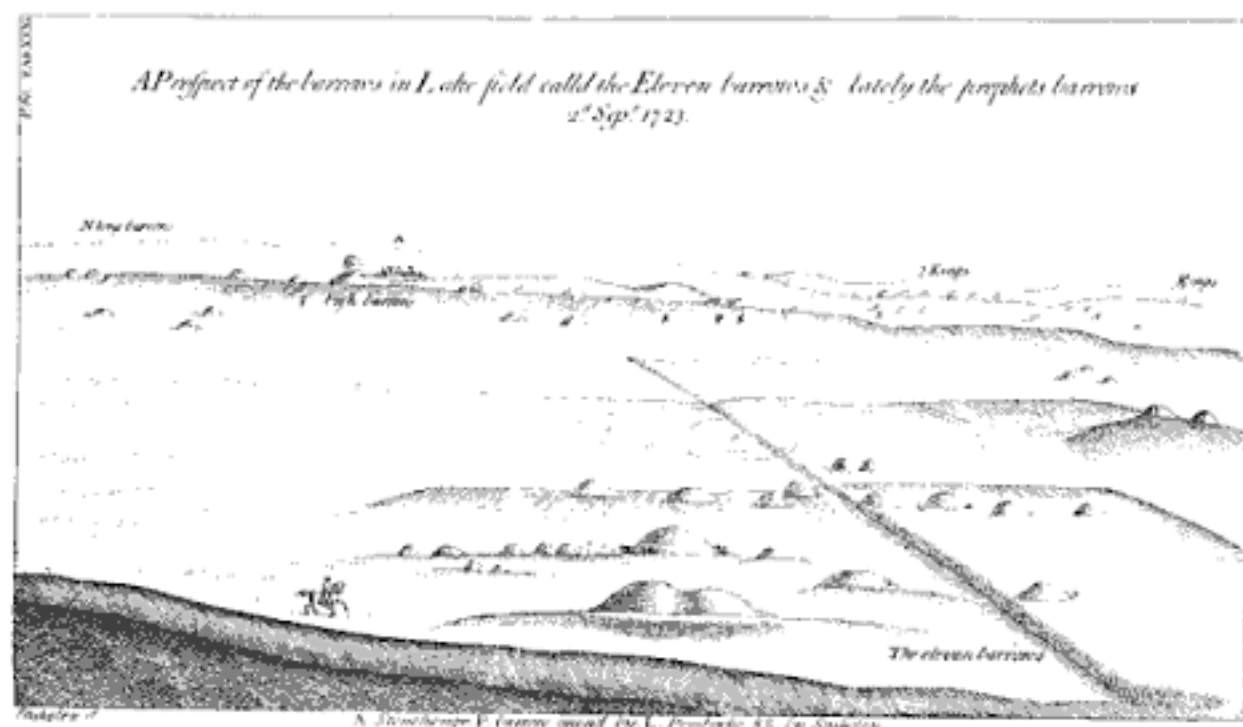


Plate 31. A Prospect of the barrows in Lake field called the Eleven barrows & lately the prophets barrows 2d. Sepr. 1723.

A. Stonehenge. P. barrow opened by L. Pembroke. SS by Stukeley.

One would imagine, the fashion of these most antient charts, was to divide the circle into 12 parts, and affix the celestial signs of the zodiac to them; beginning with the east at aries, where the sun rises at the equinoxes; and thence they might call the box by the name of aries, as shewing the east where aries is plac'd. As now the Turks and Arabians call it kibra noma, i.e.

shewing the kibra, or south point, the way toward which they turn their faces in devotion. So we only enquire for the north point; and call it the lode-stone, because it shews the lode-star or north pole. But 'tis all one; any one point in a circle being found, the red are found too.

From what has been said, it seems probable, that the fable of the hero finding out the spring in the sandy deserts of Africa, by the help of a ram sent from Jupiter, means the travelling over those immense plains by the help of a compass, which they call'd by the name of a ram, or a golden ram. And that the possessors of the antient oracle of Ammon had such a secret, which they cunningly applied to the sacreds of their deity. Probably, in that most early age, they had not improv'd the use of it to the pitch and manner that we enjoy, with a needle; and that set upon a central pin: but having found out the veracity of the magnet, they put it into a boat, which was to swim on water, and therein it would have liberty to turn itself to its proper direction. And this is the sentiment of the learned Dr. Wallis, in the Philosophical Transactions, No. 278. This boat was the better a handle for the mythologists to call Hercules's vessel a golden cup, because cups were made in the shape of a boat, and had the same denomination, cymbium.

Those learned commentators upon Curtius abovementioned agree, there was a stone along with the statue of Ammon, carried about in the golden ship; and perhaps, hence the antient navigators took the hint of applying the figure of the ram to their compasses, however form'd, and gave it the name of the ram, or golden fleece, which the Greek fables, their most antient history, ring of: and hence their ships deriv'd their oracular quality. Phrixus's ship, the golden ram, being said to speak on occasion, as well as the ship argos. The stupendous properties of this stone, without difficulty, would persuade even those above the vulgar, that there was a divine principle in it, quite metaphysical, consequently oracular. And in the dawnings of idolatry, the evil agent who was vigilant to pervert every thing to his own purpose, would not fail to make great use of the secrets of the magnet. The intire notion of oracles among the heathen, is caused by the devil's mimicry of God's transactions among the patriarchs and the Jews. But I believe the Egyptians took their notion of carrying a boat in all their religious processions, from this magnetic boat, of which both Herodotus and Plutarch inform us. For they intended it to signify the movement and descent of the divine ideas from the supreme mind; especially the very fountain and principal of those ideas: and it must be own'd to be admirably well chose. Hence the top and the bottom of the verge or limbus of the

celebrated Iliac table, is adorn'd with a boat. In one a ram, in the other a bull. Meaning the origin of the chain of ideas flowing from the divine mind. 'Tis highly probable, that with the ram is the copy of Jupiter Ammon's boat, mention'd by Curtius. And I suppose this is Herwart's opinion, but I have not yet seen his book. Of this I shall discourse larger in my explication of the Bembin table. However Herodotus tells us in his II. book, that the temple of Jupiter Ammon took its rise from Phœnicia. I only mention this for the sake of those that are over acting the credit of antiquities in Egypt.

We learn in Plutarch's discourse de Isid. & Osir, that the ship argos of the Greeks, was in reality the ship that our Hercules sail'd round the world in. Further, this oracular ship has its name argos, says my friend Mr. Baxter, gloss. ant. rom. from the Hebrew and Syrian word argan, an ark. Which confirms what I said above, concerning the carrying about the ship of Ammon on the shoulders of the priests. Strabo in II. of his geography, mentions the temple of Leucothea, built by Phrixus at Colchos; that there was an oracle there; and that the sheep was never slain at the place. This shews its relation to that of Jupiter Ammon. Leucothea is the name of consecration of Hercules his mother, Hercules himself being call'd Palæmon; both made sea deities: from the extraordinary fame of Hercules, the first and great sea captain. Pausanias in Atticis says, he was buried in the Corinthian Isthmus; where the Isthmian games were kept to his memory. But Mela writes, that his remains were at Gades. It's probable there was only an honorary monument of him at the Isthmus, as founder: as the honorary monument of Jolaus mention'd to be among the Thebans, by the Stadium, p. 42.

Mr. Baxter in gloss. ant. rom. ascania makes Phrixus to be Aphricus, and the same person as Jupiter Ammon, or the founder of the temple of Jupiter Ammon; rather, of that prior to Jupiter Ammon. We are not to regard the little artifices of the Greeks, who draw all celebrated events and persons of antiquity, into their own country. Aphricus, no doubt, is the Aphre before-mentioned, son of Midian, son of Abraham; whom Cleodemus makes an associate of Hercules, in his Lybian wars. Josephus makes him the conqueror of Lybia, and that he gave name to Africa. 'Tis not unlikely but that he is the hero that travell'd over these barren lands by the help of the compass, as his countrymen the Arabians have from times immemorial practised, in travelling over their own desarts. And might probably erect a patriarchal temple there; and in times of his posterity it degenerated into the

idolatrous temple of Jupiter Ammon: And there the compass box of the hero remain'd, and was converted into part of the heathen sacreds.

'Tis no very strange matter, is they at another time call this same hero Bacchus, therein confounding him with the like travels of the Israelites, through the Arabian desarts. We are not to expect these histories of old times involv'd in fable, absolutely consistent. But is this account be agreeable to truth or near it; then we may imagine the same Aphre, by the Greeks call'd Phrixus, according to Mr. Baxter, pass'd the Hellespont, made the expedition into Colchis, and built a like temple there. And a compass box called the golden ram, was made alike part of the object of their adoration. This is exceedingly confirm'd by the report of Herodotus and Diodorus S. who say, the Colchi practised the rite of circumcision, a matter which the learned cannot account for; but appears plain from hence: these being the descendants of Abraham. They say, at the same time, that the Ethiopians practise the like: and that 'tis no recent custom among them, but from the beginning. I apprehend by Ethiopians are meant Arabians, who are people descended from Abraham. Herodotus says likewise the Egyptians circumcis'd, which must be accounted for in this same manner; some Arabian or Ethiopian nation bringing the custom among them. As a further confirmation of Phrixus being Aphricus, Bochart shews the Colchic and Hebrew tongue is much a-kin. And thus we may account for what Mr. Toland, p. 133. says, that the idiom of the Irish language (which we suppose the remnant of the most antient oriental,) has a mixture of Arabic in it.

I saw a book in Dr. Mead's library, Museo de las medallas desconecidas Espanolas, p. 35. No. 82, 83. are two ancient unknown medals, such as they often find in Spain. The first a head (not of the best workmanship) on the obverse, young, but heroical enough, a necklace on. Behind it A Φ P A in the old Phœnician character, like the Samaritan. Reverse a horseman, and under the exergue another word in like Punic character. The other No. 83. has the same head in the obverse, but without the necklace: and A Φ P A before, in plain Greek, behind a dolphin. The reverse as the last. There is another such coin in the same book, no difference, but the name and dolphin transpos'd: I verily believe this is our Aphra, or Apher in our English translation call'd Epher, Gen. xxv. 4. struck by some city in Spain, who acknowledged him their founder.

refer the origin of the Britons to him. I mean that eastern colony that came hither with Hercules, upon the old possessors or aborigines Albionites, which gave the more famous name of Britain to the island. The Brigantes is the same name, says Mr. Baxter the common and more ancient name of this people: who being driven northwards by inundations of foreigners from the continent in after times, the name became more appropriate to the inhabitants of Yorkshire and the neighbouring counties. In Tacitus the Brigantes are called *maxima Brittanorum natio*. At the same time they forc'd the ancientest possessors, the Albionites or Albanians still more northwards. Likewise many of these Brigantes pass'd into Ireland, where they became a famous nation. The Bryges, Phryges, Phrixi, Briones, Brigantes, Britons are intirely synonymous words in different dialects. And this assignment of the origin of our ancestors, very well accounts for that notion of their Phrygian or Trojan descent, so riveted in the minds of the old Britons. A notion which prevail'd among some of the Gallic nations on the continent, and they had retain'd the memory of it, in the time of Ammianus Marcellinus, who mentions it. Likewise in Cæsar's time, some Gallic nations, claimed kindred with the Romans; probably upon this very account.

This is, in short, some presumptive evidence we have, of Hercules and Aphricus planting Britain, introducing the Druids with the patriarchal religion: and concerning the knowledge they had of the use of the compass. This whole matter will be further considered, when I come to treat of it expressly. At present we will continue the history of the compass, as it became more fully known to the world.

Martinius in his *Atlas*, and Gilbertus de *magnete*, Lib. 1. 2. show us, the Chinese have us'd the magnetic needle from times immemorial: that they have a trick of telling fortunes with it: as the heathen afore-mentioned made it oracular. The Arabians likewise have us'd it, for travelling over the great and wild desarts, of weeks together, where there is no track to guide them; nor have they any notion of time when they began this practice. Herwartius published *admiranda ethnicae theologiae*, wherein he endeavours to prove that the old Egyptians had the use of the magnetic needle, and that the Bembin table contains the doctrine of it, envelop'd in hieroglyphicks. The learned Fuller in his *Miscellanies* Lib. 4. 19. asserts, that the Phœnicians knew the use of it, which they endeavour'd to conceal by all possible means, as they did their trading in general. That it was lost with them, as many other arts, their *ars plumaria*, the dying of purple, (the

invention of our Hercules of Tyre) the Hebrew poetry, and other curious knowledge, which is perished.

'Tis not unlikely that the lodestone being applied to religious use, was one cause of its being forgot: together with the secrecy of the Phœnician voyages. Suetonius in Nero, speaks of a prophetic needle, which the emperor us'd to pay his devotions to. The learned Burman shews, that most, or all of the old MSS. and printed books, read it *acuncula*, *acucula*, or *acungula*; which, in my opinion, the criticks have causelessly corrected into *icuncula*: because they had no notion of the magnetic needle being understood by it.

Monsieur Fauchet, a famous French antiquary, in his antiquities of France, quotes some verses from a poet in that country, who wrote A.D. 1180. wherein is as plain a description of the mariner's box, as words can make. The poet mentions it by accident, not as a thing new and strange. Osorius in his discourse of the acts of king Emanuel, refers the use of the compass among the Europeans, to Gama and the Portuguese, who found it among some barbarous pyrates, about the Cape of Good Hope; who probably were some remains of the old Phœnicians, or Arabians, or at least have preserved from them, this practice. About A.D. 1260. Paulus Venetus is said to have brought it from China; by the great author on the magnet, our countryman Gilbert. Genebrand in his chron. says, the use of the lodestone reviv'd among us about A.D. 1303. by Fl. Melvius a Neapolitan, and others attribute it about that time to John Goia a Neapolitan. Joseph de Costa says, some Mahometan seamen whom Vasquez de Gama met with near Mosambick, who had sail'd those seas by the use thereof, taught it him. I observe our ancient Britons, the Welsh, call a steers-man or pilot *llywydd*, whence no doubt comes our English word lode-stone, and lode-star, the north-pole. *Llyw* is the helm of a ship in British. *Lodemanage* in Skinner's etymology an old English word, signifying the price paid to the pilot. Our lords of the Cinque Ports keep a court at Dover, by that name. These things seem to indicate some memorial of the magnet left among the Welsh, from the oldest times: and of its application to sailing.

Thus have we given a kind of history of this prodigy in nature, the magnetic needle: to confirm our suspicion, that the British Druids knew the use of it, and used it in these works of theirs, which we have been treating of. We learn in the Philosophical Transactions, Lowthorp, Vol. II. p. 601. that there

are considerable veins of the magnet, in our own country, in Devonshire; where the Phœnicians and Druids must needs be very conversant.

We return now to our first subject Stonehenge, and apply what has been said, to the observation we there made. It is not to be thought, that the Druids, men who employed themselves in those noble studies, which Cæsar gives us an account of; and who were at the pains of bringing these vast stones together, from such a considerable distance of 16 miles: I say, it is not to be thought, but that they would be nice and exact in placing them. And this, not only particularly, in respect of each other, upon the projected ground-plot: but also in general, in respect of the quarters of the heavens. And this I found to be a just surmise, when I examined their works for several years together, with sufficient accuracy, with a theodilite. As I took notice before, the works of one place regarded the cardinal points, but with a certain uniform variation therefrom. Whence I grounded my conjecture, that they were set by a compass, which at that time varied, according to that quantity observ'd. Of which property of variation we may well suppose, the Druids were ignorant. This I now propose for the rule of investigation, of the time when Stonehenge was erected. Hoping the reader will judge as favourably of the attempt, as things of this great antiquity require.

The variation at Stonehenge is about 6 or 7 degrees, from the north eastward. I have in order to form our hypothesis, set down a scheme of the state of the variation in England, from the best observations I could meet with Dr. Halley takes notice, that the variation at Paris is always 2 degrees and a half more easterly than with us. Orontius Finæus in 1550 observ'd it to be there, about 9 degrees, easterly, therefore to reduce it, I have stated it at 11 degrees 30. and from thence continued it, to the present time, as in the ensuing table.

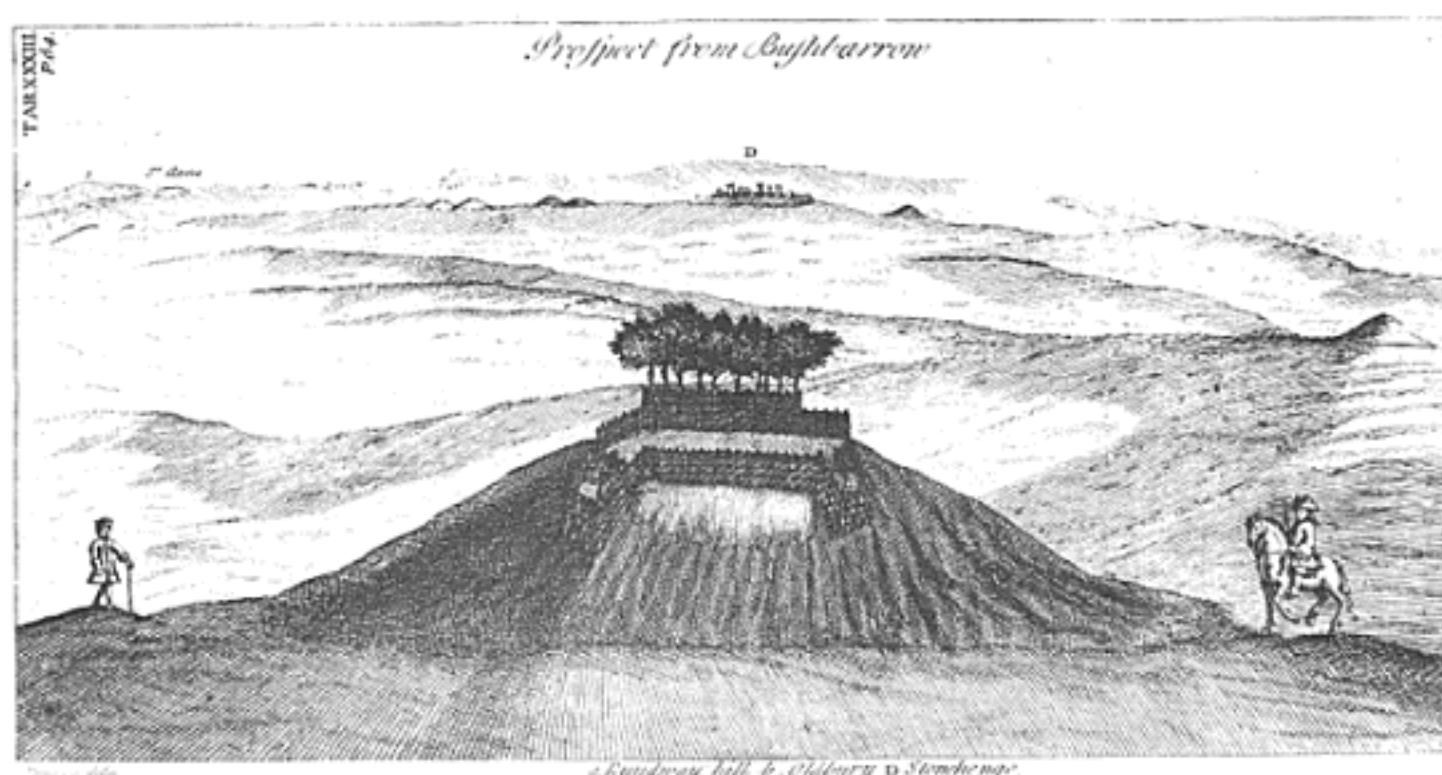


Plate 33. Prospect from Bushbarrow.
a. Runway hill. b. Oldbury. D. Stonehenge.

Anno Dom.	Observation.	Variation. deg. min.
1550	By Finæus	11 30 east.
1580	Mr. Burroughs	11 15 east.
1600		8 0 east.
1622	Mr. Gunter	6 0 east.
1634	Mr. Gellibrand	4 5 east.
1642		3 5 east.
1657	Mr. Bond	0 0
1665	Mr. Bond	1 22 west.
1666	Capt. Sturmy	1 27 west.
1667	Capt. Sturmy	1 33 weft.
1672	Dr. Halley	2 30 west.
1683		4 30 west.
1685		5 5 west.
1692		6 0 west.
1723		11 0 west.

1733	12 0 west.
1740	15 45 west.

By this table it appears, that in the space of 180 years, the variation of the magnetic needle in England, has shifted from 11 degrees and a half eastward, to 11 degrees and a half westward. In 90 years the medium of those extremes, which was 1657, there was no variation at all; the needle pointing due north and south. But alas our observations extend no farther. We know not the bound of the variation, on either hand: nor the quantity of its motion, when thereabouts. Mr. Geo. Graham thinks it is now near the western bound. It is very slow, in all probability, when upon the return, and as it were, stationary: like the sun's motion at the tropics, when it is returning. So that the nice determination of its circle, and of its motion, is reserved for remote posterity. Dr. Halley conjectures, that the whole period of variation, is perform'd in about 700 years. Upon this supposition, in gross, we may thus found our conjecture, of the time of building of Stonehenge.

By what we can find, the variation is about 9 minutes in a year, or a degree and a half in to years, at this part of its circle. Now I observ'd at Stonehenge, that the eastern wing of the avenue, the cursus and other parts belonging to the temple, abated somewhat in their variation, eastward, being somewhat less than that of the temple itself. It is highly reasonable to believe, that the great work of Stonehenge could not take less than half a score years in building: and that those other works were made in succeeding years, not long after it was finished. From hence I gather, which way the magnetic variation was moving, at the time of sounding Stonehenge, viz. from east toward no variation and so to west. This must be the foundation of our calculus.

Therefore at the time of the founding of Stonehenge, the variation was about the same quantity and place, as about A.D. 1620. in our preceeding table. Supposing with Dr. Halley, the revolution of this variation be about 700 years, three intire revolutions thereof, bring us to about the year of the city of Rome 280. which is about 460 years before our Saviour's time: 420 years before Cæsar invaded Britain. About 100 years before our Saviour's birth, Divitiacus made the Wansdike north of Stonehenge, and drove the possessors of this fine country of the Wiltshire downs, northwards. So that the Druids enjoyed their magnificent work of Stonehenge, but about 360

years. And the very great number of barrows about it, requires, that we should not much shorten the time. Sir Isaac Newton in his Chronology, reckons 19 years for a medium of a king's reign. So that in that space, there were about 19 kings, in this country. And there seems to be about that number of royal barrows (in my way of conjecturing) about the place.

I observe, this time we have assign'd for the building of Stonehenge, is not long after Cambyzes's invasion of Egypt. When he committed such horrid outrages there, and made such dismal havock, with the priests and inhabitants in general, that they fled the country to all parts of the world. Some went as far as the East Indies, and there taught many of the antient Egyptian customs; as is taken notice of by the learned. It is not to be doubted that some of them fled as far westward, into the island of Britain, and introduced some of their learning, arts and religion, among the Druids; and perhaps had a hand in this very work of Stonehenge: the only one that I know of, where the stones are chizel'd. All other works of theirs, are of rude stones, untouch'd of tool, exactly after the patriarchal and Jewish mode: therefore older.

This was at a time, when the Phœnician trade was at height, the readier a conveyance to Britain: it was before the second temple at Jerusalem was built: before the Grecians had any history.

Directions to the binder

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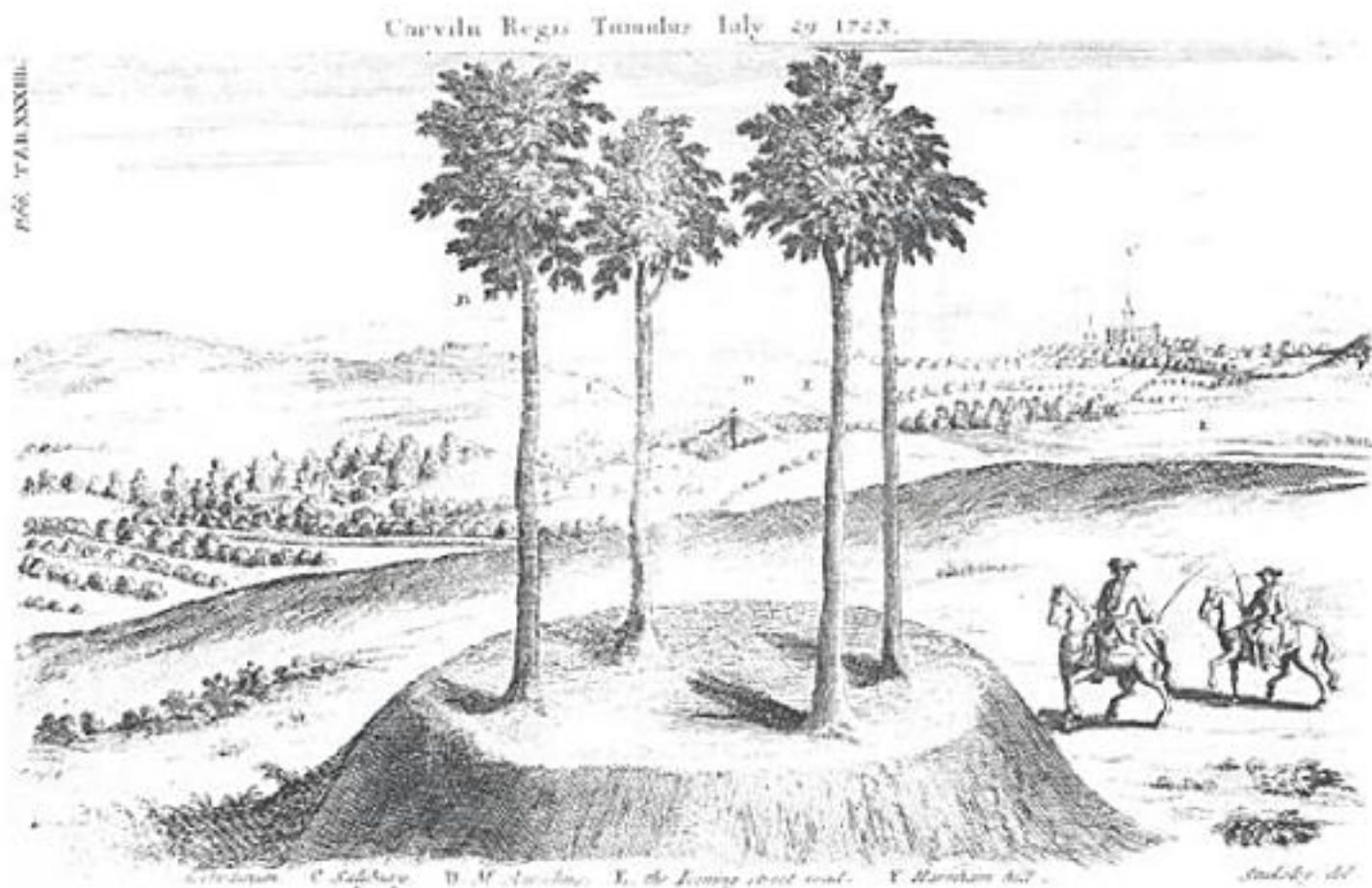


Plate 34. Carvili Regis Tumulus July 29 1723.
Sorbiodunum. C. Salisbury. D. the Icening street road. F. Harnham hill.

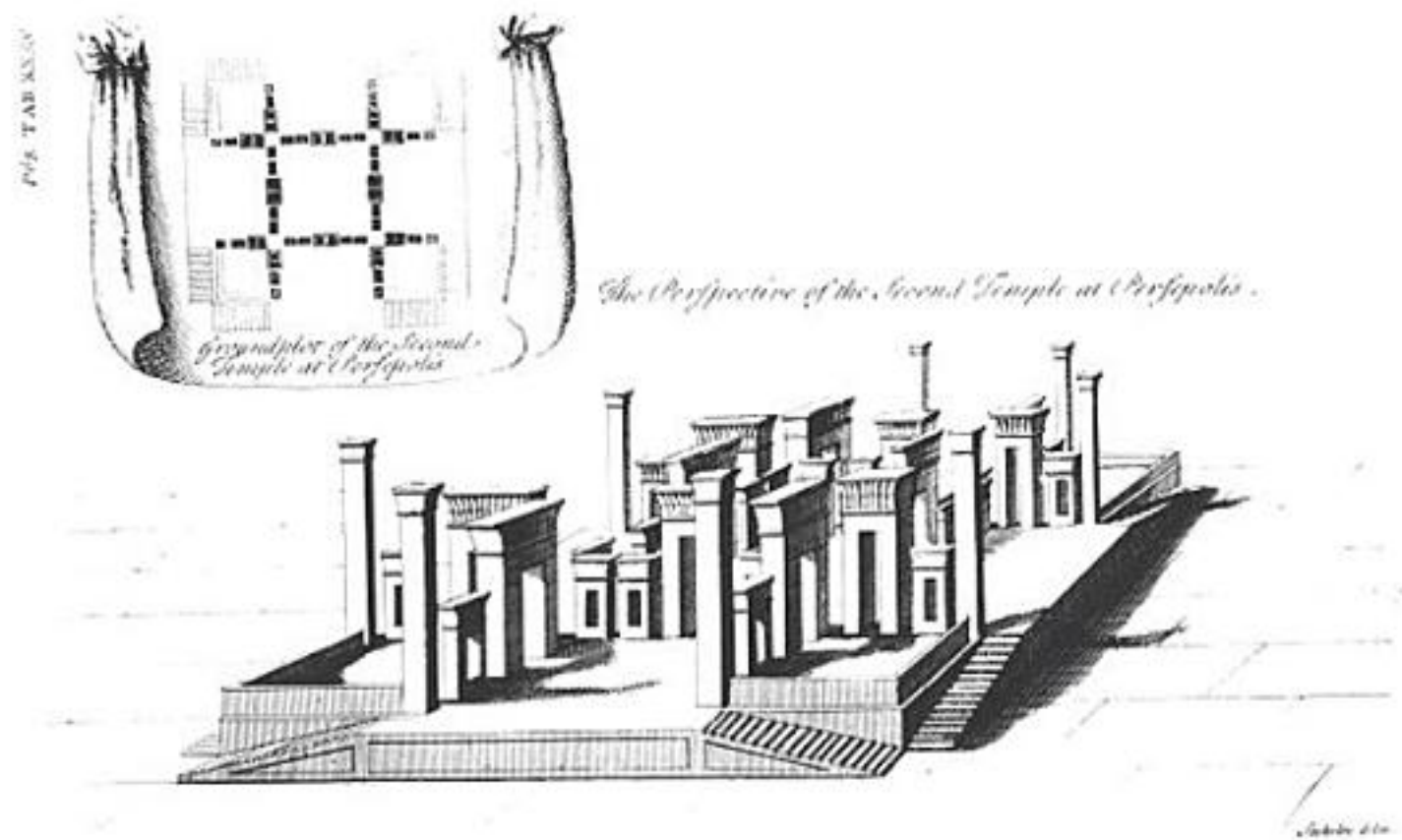


Plate 35. The Perspective of the Second Temple at Persepolis.
(inset) Groundplot of the Second Temple at Persepolis.



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