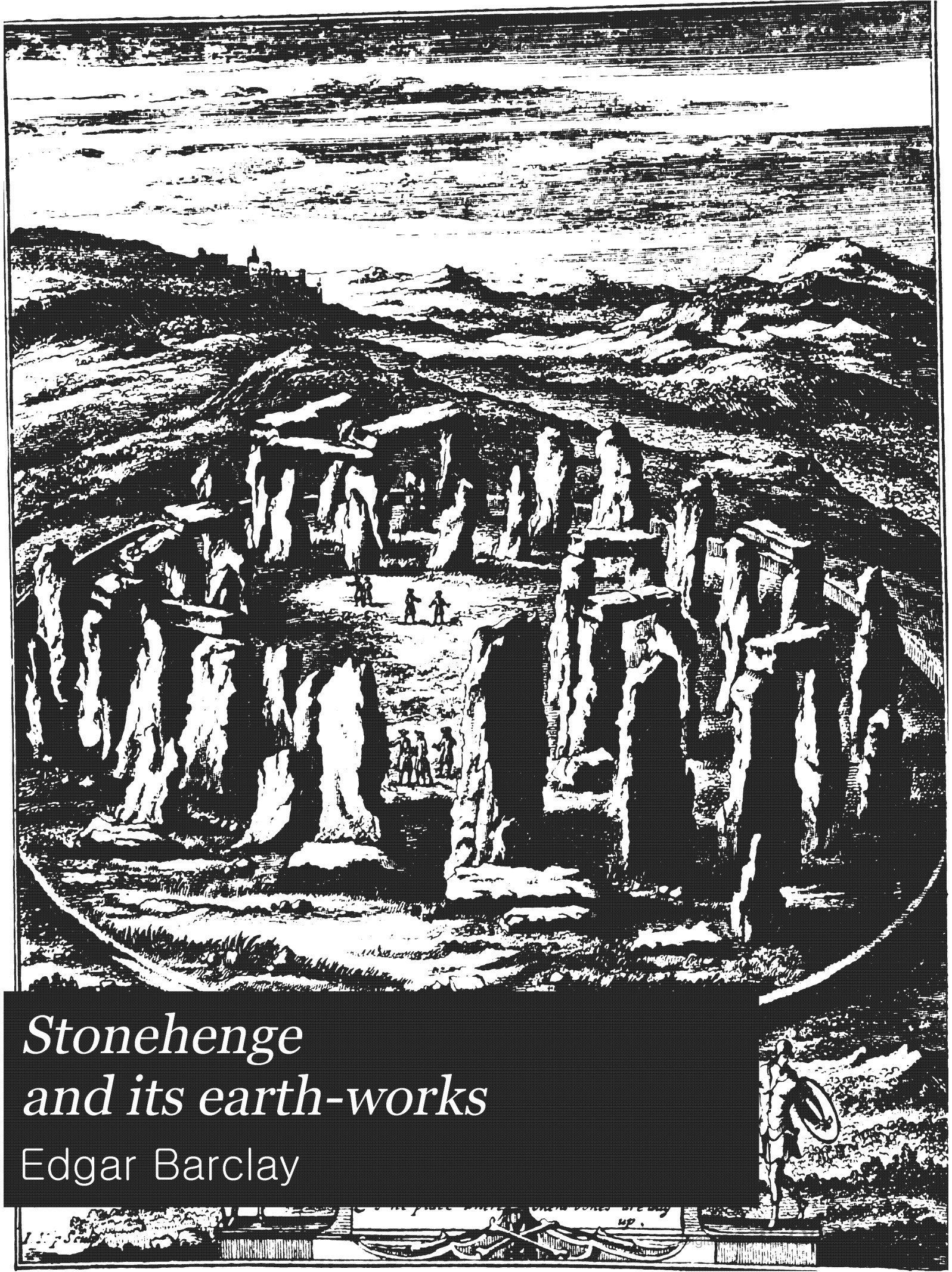


# *Stonehenge and its earth-works*

Edgar Barclay

HARVESTING AT STONEHENGE.

# STONEHENGE

AND

# ITS EARTH-WORKS.

With Plans and Illustrations.

BY

EDGAR BARCLAY, R.P.E.,

AUTHOR OF "MOUNTAIN LIFE IN ALGERIA".

LONDON:

D. NUTT, 270 AND 271, STRAND.

1895.

LONDON :

PRINTED AT THE BEDFORD PRESS, 20 AND 21, BEDFORDBURY, W.C.

# Contents.

## LIST OF ILLUSTRATIONS.

## HEADINGS TO CHAPTERS AND TAIL-PIECES.

### HEAD-PIECES.

1. The Union of Divine Love and the Soul. From a Greek intaglio by Trython. See J. Bryant, *Ancient Mythology*, p. 393.

2. Jupiter and the Giants. The centre of the design from a cameo in the Naples Museum.

3. The Sun-god and Moon-goddess. The designs in the medallions are taken from silver clasps in the Naples Museum.

4. Janus and Juno. See J. Bryant, *Ancient Mythology*, vol. ii, p. 262.

5. Diana Victrix overtaking the Spotted Deer, which she strikes down with her quiver full of arrows; from a vase in the British Museum. The moon overtakes the stars, whose light she subdues with her beams.

6. The Medusa head and the Caduceus.

### TAIL-PIECES.

The Britons do not regard it lawful to eat the "Hare", the "Cock", and the "Goose"; they, however, breed them for amusement and pleasure.—J. Cæsar, *Gallic War*, v, 12.

We have no further information on this subject, but as, elsewhere, Cæsar mentions that, respecting their chief deities, whom he equates with Latin gods, the Gauls

or Celts for the most part had the same belief as other nations, we may infer that their ideas concerning these sacred animals were similar to those of peoples in the south of Europe.

The hare was sacred to Venus. "The Cupids wish to present the hare, the sweetest of all sacrifices, alive to Aphrodite." See Venus worship, Crowe and Cavalcaselle, *Life of Titian*, vol. i, p. 191. In Welsh legend the hunted hare seeks refuge in the folds of the robe of the virgin princess St. Monacella, whilst she is engaged in deep devotion in a thicket; when the huntsman blew his horn it stuck to his lips.

"The cock and the oviparous hen," says Mr. A. de Gubernatis, "are as egg-yielding symbols of abundance, and personify the Sun." Superstitions in regard to the cock, "the trumpet of the morn," are mentioned in a well-known passage in the opening scene of Hamlet; and the domestic egg, observes Mr. A. E. Waite (*Occult Sciences*) "is redeemed from irretrievable commonplace by its symbolic value, its suggestion of hidden possibilities, and of a world in miniature."

The goose, an emblem of plenty, and the peacock, were sacred to Juno, Queen of Heaven, "who presided over marriage and childbirth, and particularly patronised the most faithful and virtuous of the sex, and severely punished incontinence and lewdness in matrons."—*Lempriere.*

# Preface.

HAVING been deterred from publishing material I have of late years collected for a work on Stonehenge, on account of the financial risk involved in bringing out a book on a technical subject that must of necessity appeal to a comparatively limited audience, I am now encouraged, and at last am able, to carry out my project, through the favourable response which has been made to the prospectus I have issued appealing for subscribers.

Whilst offering my sincere thanks to all who have given me material support, as some amongst them wrote down their names for this volume more than three years ago, I must express regret that circumstances have not enabled me to complete the undertaking earlier.

In the spring of 1892, I exhibited, in the Gallery of the 19th Century Art Society, Conduit Street, a collection of cabinet pictures, the result of several visits to Amesbury, and the collotypes of the present volume are reproductions of photographs taken by my friend Mr. Burchett from a selection of those paintings; at the same time I took advantage of the opportunity to exhibit most of the plans and drawings now published with them.

A year later I made the acquaintance of Mr. Romilly Allen, then about

to bring out the first number of the *Illustrated Archæologist*, and it is chiefly due to the stimulating effect of interest shown by him in my studies, and to his sound advice, that I have been able to utilize my material. Owing to his kindness, I obtained an invitation to read a paper on Stonehenge before the British Archæological Association, June 1893, and in the September following he published an article by me on the same subject in the *Illustrated Archæologist*. I take this opportunity of thanking him for help thus kindly rendered.

The book undertakes to give a sufficing account of Stonehenge, and to be, as well, a book of reference to the literature of the subject; which, excepting small handbooks, is inaccessible to the general public.

The older works, such, for instance, as those of Inigo Jones, Sir R. Colt Hoare, and Stukeley, are out of print and expensive, whilst later contributions to our knowledge are for the most part scattered in the published *Proceedings* of various learned Societies.

A list of authors, arranged in chronological order, is appended, giving their recorded opinions in regard to the nature and approximate date of the antiquity; it will be noted that there is considerable divergence of opinion amongst our authorities.

It is hoped that this volume is sufficiently illustrated with plans and drawings to enable the reader to judge for himself the merits of the various theories; if, when upholding my own views, it shall be shown that I have, like others before me, inadvertently fallen into error, the critic is begged to indulgently bear in mind the difficulties contended with.

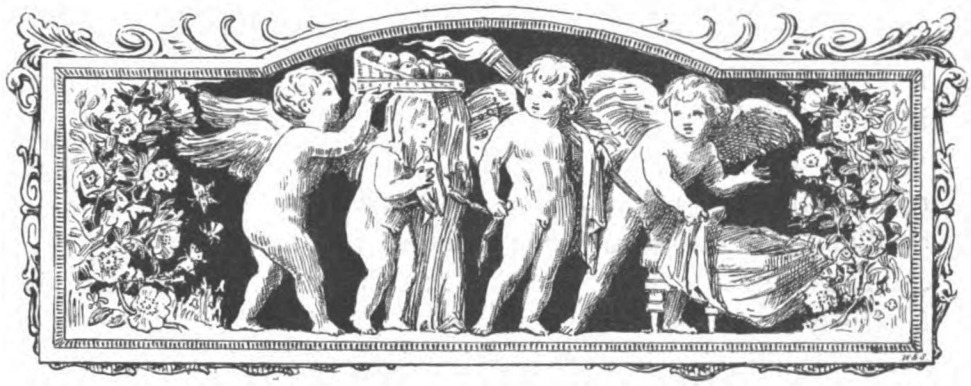
Of digging, surveying, and writing, there has been plenty. How comes it then that the Stonehenge question still remains beset with contradictory theories, which are rendered untenable by the overlooking of facts, some more, some fewer?

This unfortunate result appears to be in some measure due to the circumstance that a paper, however concise in style, fit for a learned society, is unsuited for reviewing the whole subject matter. Such contributions, indeed, aim at, and achieve, thoroughness, but as a consequence of details

being treated with minute care, they fail to take a general view ; indeed, as a rule, it may be said, the more valuable the paper the less the ground it covers. At the same time the risk of incurring pecuniary loss by bringing out a book, is best appreciated by those most accustomed to write on kindred topics.

That the public take a lively interest in Stonehenge is well attested by the fact that in spite of its solitary situation it is so largely visited. Except during the inclement winter months, never a day passes without the arrival there of carriages, and often three or four different parties are present at the same time. The writer has witnessed over two hundred persons assembled to see the midsummer sunrise ; and 3 A.M. is not the most convenient of hours for visiting a ruin so remote from the comforts of home.

THE APPROACH.



## CHAPTER I.

# Description of Stonehenge.

ALTHOUGH the first impression produced by Stonehenge on the visitor is often one of disappointment, this is usually due to its being first seen at a distance, when it appears but an insignificant object in the midst of the wide-spreading chalk downs upon which it is placed, and which constitute what is known as Salisbury Plain; nevertheless, upon close inspection, when the size of the rocks which compose it is apparent, this unique relic of antiquity, by the sense of a grim earnestness, of energy and grandeur, which it never fails to convey, redeems its world-wide reputation; and it is safe to predict that, with the course of time, the interest felt in it by the public will continue to increase rather than slacken.

At present it enjoys two distinct advantages, and long may it continue to retain them; it remains undisturbed by the hand of "the restorer" and unvulgarised by schemes of the would-be

"improver"; so that, although a ruin, having suffered of old from the unscrupulous depredations of "the spoliator", from the ill-judged diggings of the "curious", from the wanton chippings of visitors, and from the climatic vicissitudes of centuries, it yet remains bare and unenclosed amidst the wide-spread solitude, in a condition to enable us to judge of the effect it first produced.

The nearest village to "the Stones", as the monument is familiarly named in the neighbourhood, is Amesbury, about two miles distant, lying in a sheltered and wooded vale amongst the downs. At the lower end of its high street is an ancient church, set in a background of trees, and a bridge spans the river Avon, which here issues from Amesbury Park, the seat of Sir Edmund Antrobus. Within the park is a wooded eminence, verdure descending its escarped banks to the stream which winds at its foot, and which continues its course below the bridge through water meadows, until a second wooded bank causes it to sharply turn and repass the hill in the park, flowing now to the south-west of it, having previously washed its eastern bank.

The height thus protected on two of its flanks by the river, is further strengthened on its north-western side by an earthwork—a formidable rampart 600 yards in length. The land dips abruptly from this fortification, making a great sweep, like the hollow of a wave, before rising toward the downs; to the north only is the land level, allowing of easy access to the enclosure, now a game preserve, which is named, without legitimate reason, Vespasian's Camp. It is spoken of by Sir R. Colt Hoare in his account of Wiltshire in the following terms:—"This extensive work is generally supposed to be Roman, and has, as well as the neighbouring camp of Yarnbury, been attributed by Stukeley to the Emperor Vespasian. That this great general occupied one, or both, of them during his conflicts with the Belgæ, is not unlikely; but that he constructed either of them is very improbable, as they bear no resemblance whatever to camps formed by the Romans. This was originally the stronghold of those numerous Britons who inhabited the plain around Stonehenge, an asylum in times of

danger for their wives, children, and cattle; such as our experience has taught us existed all over our downs, and especially near those districts selected by the Britons for their residence."

The road from Amesbury to "the Stones" passes through one end of the ancient stronghold between the preserve and a knoll named "Gallows hill", and gradually rises until it attains the level of the plateau of Salisbury plain.

Here, hidden within a plantation, is a row of tumuli fancifully named "the graves of the seven Kings' Barrows", and from this point we first catch sight of Stonehenge another half-mile in advance. Before reaching it, however, the road descends to a little valley in the downs, where the old Exeter coaching road branches with the Bath road, which proceeds straight on, passing close to Stonehenge.

Constable and Turner have painted the prospect from the crest of this hill; the features of the scene are ordinary enough; both artists have made their work interesting by their management of light and shade.

Constable's picture has been mezzo-tinted by David Lucas; the sun is represented setting behind a second and imaginary Heel-stone, and a coach or waggon struggles into light from the intense gloom of the little hollow. Turner's Stonehenge is a plate in the *Liber Studiorum*, one of his marvellous storm effects; terrific lightnings stream from threatening clouds, as though heaven were moved to wrath at the persistence of this relic of paganism. Both artists have painted Stonehenge from a closer point of view. Constable's picture, now at S. Kensington Museum, is a storm effect with rainbow; Turner's is, again, characterised by a prodigal display of lightning: in the foreground, a shepherd and a number of sheep lie dead, the stones, arranged as fancy dictated, are represented at three or four times their real size; he also executed a mezzo-tint of the Bath coach disturbing sheep when passing Stonehenge.

### Appearance of the Ruin.

When standing within the precincts of the hoary and shattered temple, the spectator is forced to acknowledge that its unknown designer has succeeded in conveying a remarkable impression of grandeur; simplicity in the means employed is the cause of this success.

The stones differ greatly in size, and this gradation aids the impressive effect of the larger masses; bold and rugged, with no attempt at elegance or adornment, these huge rocks stir one with a sense of endless endurance and power; whilst order and dignity assert themselves amidst the wreck and wild confusion caused by the destructive hand of outrageous fortune. The rocks are so slightly trimmed, that natural irregularities everywhere abound, and they are so closely disposed within a limited area that with every few paces the grouping of the masses varies; picturesque effect is further added by the everchanging play of light and shade over the lichened and rugged surfaces.

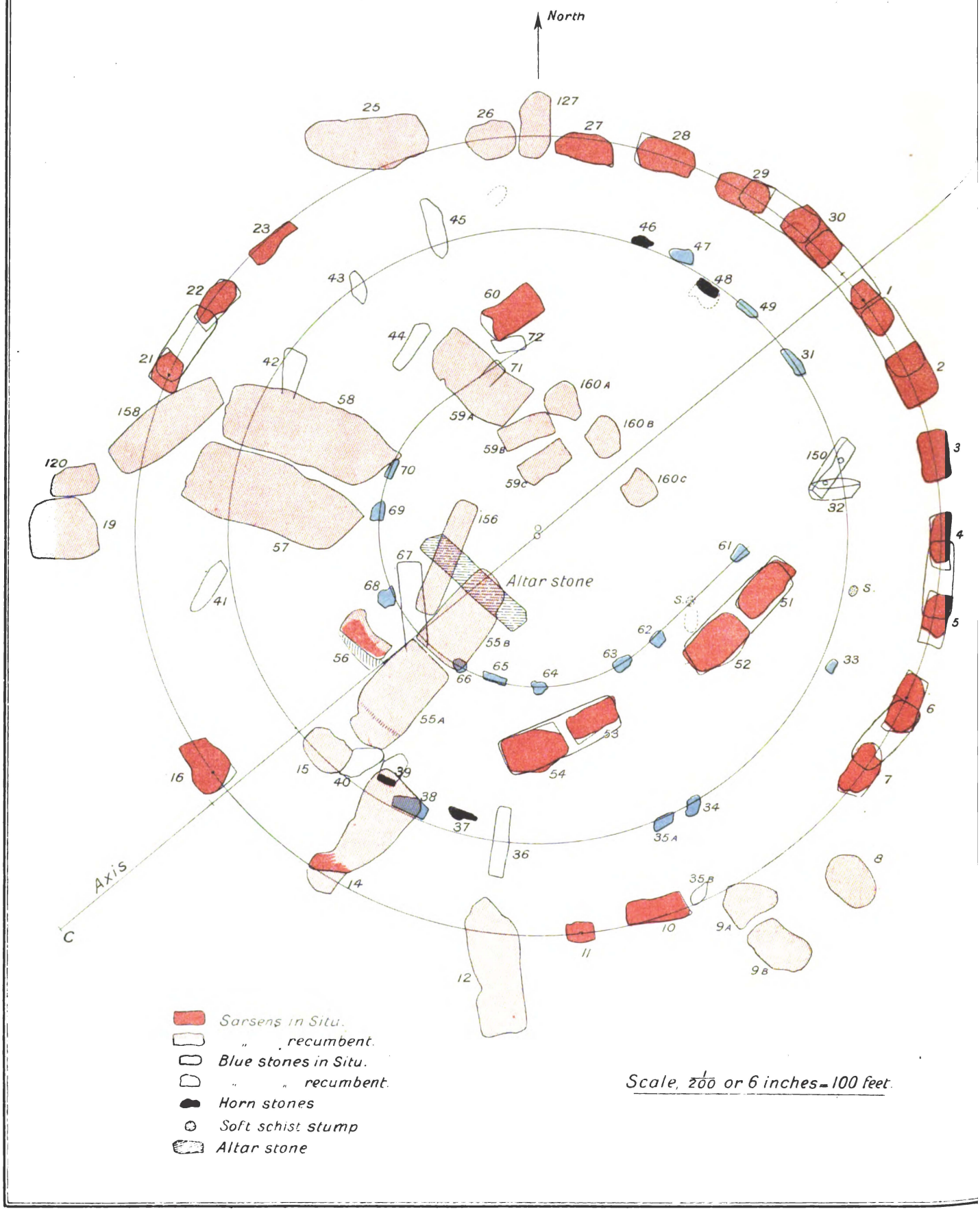
### General Arrangement of Stonehenge.

Stonehenge is enclosed by a low circular bank with outer ditch, named "the Earth-circle", now much mutilated by carriage tracks.

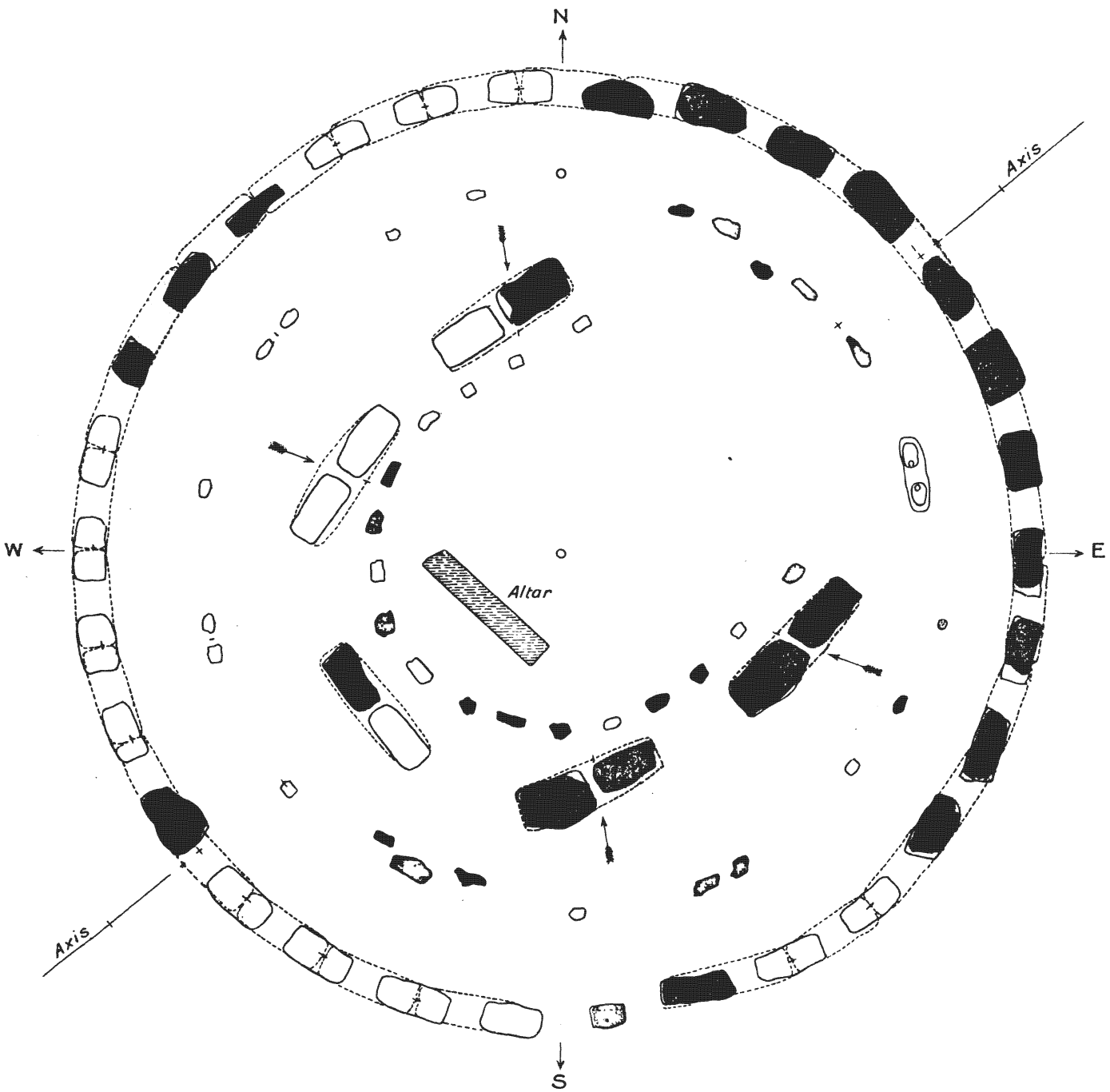
To the north-east is the ancient "Avenue" or "Approach", where are two outlying stones—the "Heel-stone" or "Sun-stone" bows towards the temple; the other, placed between the Sun-stone and the temple, lies flat with the ground, and is named "the Slaughter-stone". Two other outlying stones lie close to the Earth-circle, opposed to two mounds, very faint and unobtrusive features; these are the two Stones and two Mounds of the Earth-circle.

Stonehenge in its present disordered condition is shown by:—

*Ground Plan I.*—Many stones remain as originally placed,



# GROUND PLAN OF STONEHENGE RESTORED.




Sarsen piers in Situ.
Sarsen lintels in Situ.
Blue stones in Situ.
Horn stones in Situ.
Soft schist.

Scale, ~~200~~ or 6 inches = 100 feet.

others are prostrate, others again are fragments of shattered rocks.

*Ground Plan II* shows Stonehenge restored. Without at this moment considering it critically and in detail, a description of the general arrangement there shown will enable the intricate present ground plan to be more readily followed. The design consisted of an outer circle of thirty uprights supporting twenty-eight traverse stones or lintels; one of the piers, *in situ*, is shorter than the others, which occasioned a break in the lintel ring; so many piers remain *in situ* that their spacing shows that when complete the circle consisted of this number.

Within this circle was another, consisting of smaller uprights. These circles contained two horse-shoe figures, one within the other.

The outer was composed of five groups of stones, each group consisting of three stones—two piers supporting a superimposed block; these groups (the trilithons) still form the most imposing feature of the monument; they were graduated in height, the central trilithon excelling those next it to the same degree that these were higher than the trilithons forming the extremities of the figure.

The inner horse-shoe, like the inner circle, was composed of small uprights; both horse-shoe figures had their openings turned towards the Sun-stone. The outer lintel circle and outer horse-shoe were composed of rocks named "Sarsens", brought from the neighbourhood of Avebury, about twenty miles north of Stonehenge, where they occur in large numbers as a singular natural phenomenon, boulders lying deeply embedded in the soil of the chalk downs. To the north-east of the village of Avebury the land is thickly strewn with these boulders, found on the summit and in the hollows of the down, their appearance suggesting flocks of grey sheep, has caused them to be named "Grey Wethers"; some valleys are so choked with them as to be of a general grey tint. Geologists name these masses "Silicious Grit", or "Tertiary Sand-stones". They have commonly been named

Druid-stones. The most satisfactory derivation of the name Sarsens or Sassens is from the Anglo-Saxon word for a rock or stone, *ses*, pl. *sesen* or *sesans*. "The people where the stones are found," says Professor T. R. Jones, "call them Sasens or Sassans, so that perhaps the word Sarsens is no other than the Anglo-Saxon word for rock properly pronounced." Other derivations have been proposed, Saracen softened to Sarsen, and the Latin *saxa*, stone.[1]

The inner circle and inner horse-shoe are composed of the foreign "Blue-stones", igneous rocks. The locality from which they were originally taken remains undetermined; experts, after microscopic examination, have affirmed that in "no part of Great Britain is there any stone to be found of the same description." Of these some differ markedly in their nature from others.

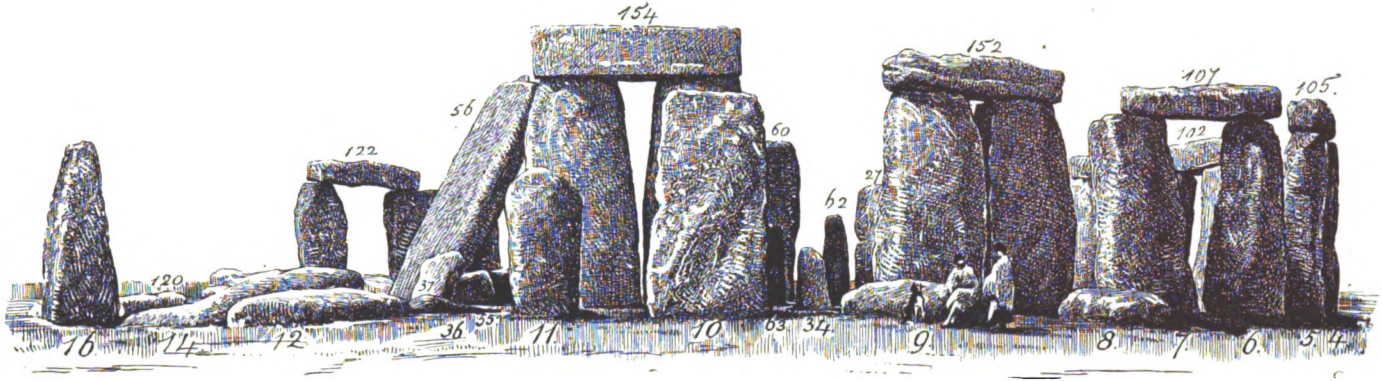
We now return to the ground plan of the stones in their present condition, PLATE I. This is taken from Professor W. M. Flinders Petrie's survey, published in his book *Stonehenge*, 1880.

The points of view from which the illustrations, numbered I, II, III, IV, and V, have been taken are shown by similar numbers, just beyond the Earth-circle, on Plate IV.

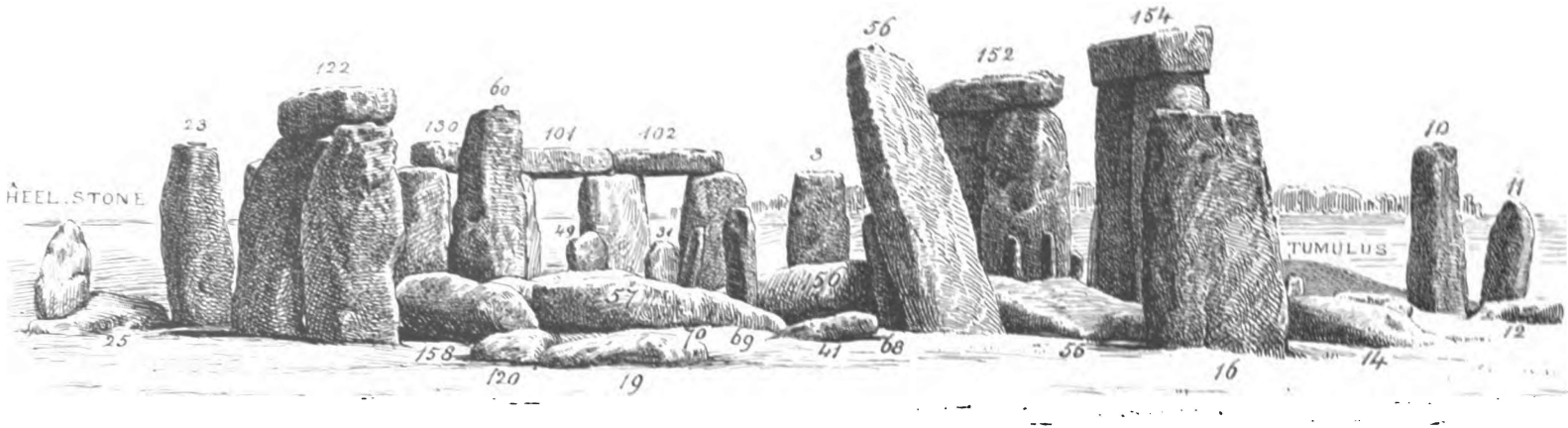
In the *Proceedings of the Society of Antiquaries of London*, vol. ii, 1881-1882, there is an account of a report laid before the Society by the Rev. W. C. Lukis on the prehistoric monuments of Stonehenge and Avebury, in which this survey is mentioned in the following terms:—"The plan under the direction of the

[1] "History of the Sarsens," Professor T. Rupert Jones, *Wilts Arch. Mag.*, December, 1886, vol. xxiii, p. 122. For an excellent account of the grey wethers see Rev A. C. Smith, *British and Roman Antiquities of North Wiltshire Downs*, p. 128. For general account of Stonehenge petrology see important article by Mr. Nevil Story Maskelyne, *Wilts. Arch. Mag.*, vol. xviii, p. 147; and for later particulars an important paper by Mr. W. Cunnington, "Stonehenge Notes," *Wilts. Arch. Mag.*, vol. xxi, p. 141. Specimens have been examined by Mr. Thomas Davies of the Government Mineralogical Department.

STONEHENGE RESTORED.

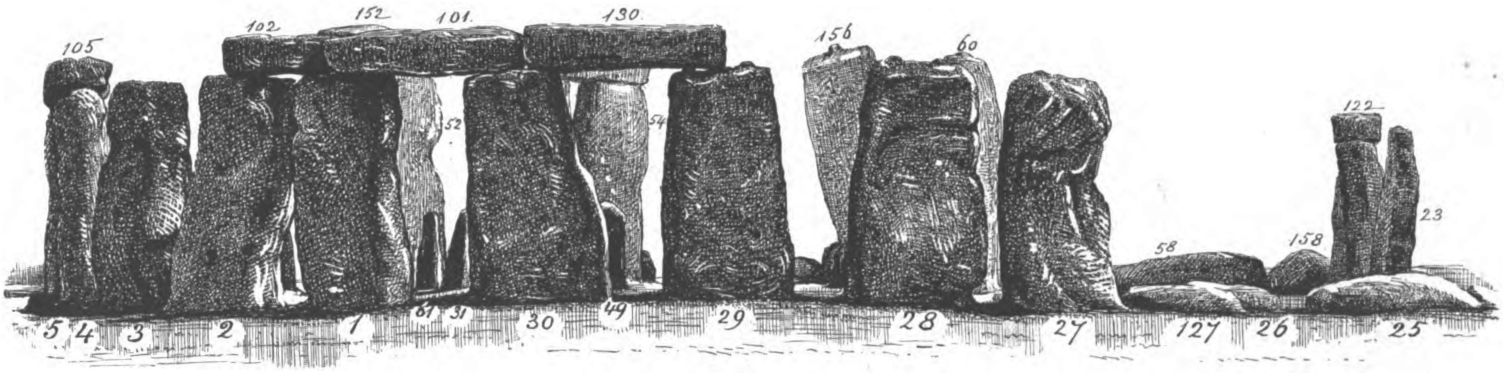



PRESENT CONDITION OF THE STONES.—VIEW FROM POINT I ON PLAN IV.

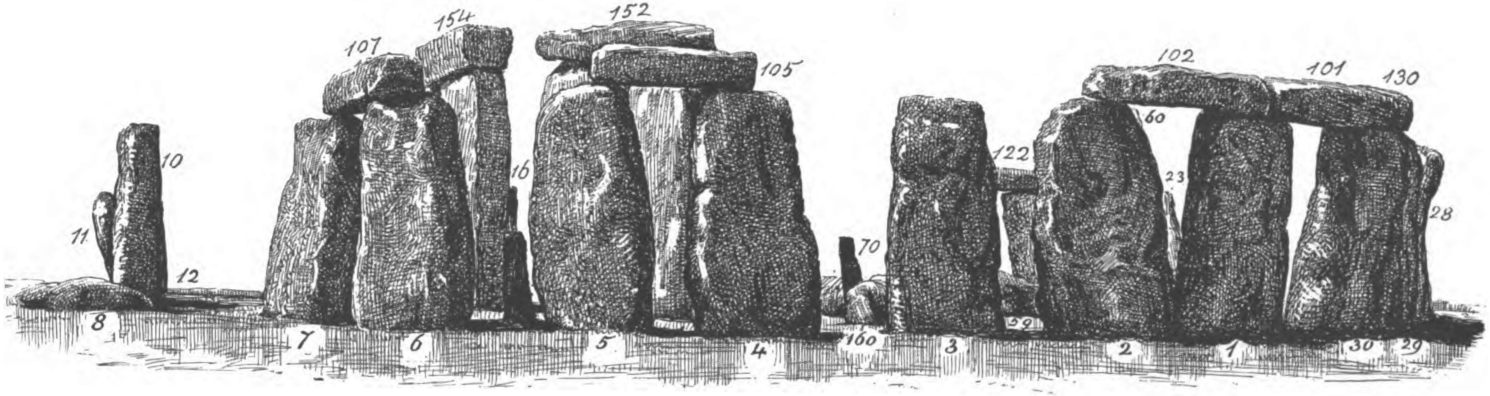



PRESENT CONDITION.—VIEW FROM POINT II ON PLAN IV.


PRESENT CONDITION.—VIEW FROM POINT III ON PLAN IV.




PRESENT CONDITION.—VIEW FROM POINT IV ON PLAN IV.




PRESENT CONDITION.—VIEW FROM POINT V ON PLAN IV.

Ordnance Survey Department and one by Mr. Flinders Petrie, in 1880, deserve mention. His plan (Petrie's) is, I confess preferable to that of the Ordnance Department, and notwithstanding one or two slight errors, may be considered very accurate. Why then should the Society of Antiquaries not have been content with it, and have desired me to draw a new plan? The only reason, and a sufficient one in their estimation, was, not that I was capable of constructing a better, but because they wished to possess one drawn to the same scale as that of other monuments which I have made for them. I should state that my measurements were taken and the plan was drawn before I had seen Mr. Petrie's, and as the method adopted by me on taking measures may have differed from his, it will be satisfactory to you to know that although mine is not equal to his in delicacy of execution, the two plans agree in almost every particular, mine being a slightly larger scale. I allude to his plan from which the published one has been reduced one-half." The orientation agrees with the Ordnance Survey, also with Mr. Hawkshaw's plan, given by Mr. Fergusson in *Rude Stone Monuments*, p. 92. Also with a plan accompanying Mr. W. Cunnington's paper on Stonehenge Chippings, *Wilts Arch. Mag.*, December 1883, vol. xxi. The different qualities of rock employed are marked in Professor Petrie's plan by different hatchings; for increased clearness of effect they are here shown by different colours; and his system of numbering, which is convenient and clear, is adhered to. No. 1 is in the outer circle near the axis, and the numbers follow on, turning sunways from east to west; first the outer circle, 1 to 30; then the inner circle, 31 to 49; then the horse-shoe of trilithons, 51 to 60; finally, the inner horse-shoe, 61 to 72. The lintels (the traverses of the outer circle) are marked like the imposts (the traverses of the trilithons), 100 higher than the number of their western support, thus piers 1 and 2 support the lintel 102; piers 51 and 52 support the impost 152.

Following the several parts in the order thus indicated, we

can appreciate the amount of damage the monument has suffered, no part more so than—

*The Outer or Sarsen Circle.*—Lintels 101, 102, 105, 107, 122 and 130 are *in situ;* 120 and 127 are portions of prostrate lintels; 8 is a portion of a pier; 9*a* + 9*b* are another pier; 12, 14, and 25 are complete piers, though prostrate; 19 and 26 are portions; 11 is the short stone, and is unique.

*The Inner or Blue-stone Circle.*—Very conflicting opinions have been held in regard to this circle, which has been grievously mutilated. Stone 150 is a Blue-stone impost; it has two mortice holes worked on one of its faces; it is unique.

Of the row of stones facing the central trilithon, named the Choir-screen, the Horn-stone 48 is remarkable by being out of line with its neighbours, and nearer the centre; 46 is also a Horn-stone. The group of three stones, 37, 38, and 39, is also noticeable; 37 and 39, which flank 38, are Horn-stones; both are placed a little nearer the centre than is 38, and that to an equal degree. This group is now much damaged by the fall of pier 14 of the outer circle.

*The Outer Horse-shoe, or the Sarsen Trilithons.*—The *first trilithon*, 51, 52, with impost 152, is perfect; the *second trilithon*, 53, 54, with impost 154, also perfect; the *third trilithon*, 55, 56, with impost 156, is in a ruined condition, due to diggings conducted by the Duke of Buckingham in 1620. The pier 55, in falling, struck a Blue-stone beneath it, which heeled it backwards and broke it into two pieces; it is marked 55*a* and 55*b*. The impost 156 was rolled across the Altar-stone, where it remains unbroken by its fall. On its under surface are two deep mortice holes, into which the tenons of its supporters formerly fitted, an arrangement common to all the superimposed stones, by which they were securely fixed in their proper places. Its upper surface has a noticeable peculiarity, it has two "incipient mortice holes" with the same spacing as those completed; these are probably due to an error on the part of the workmen, who began to sink the holes on the wider face of the rock—a not unlikely error.

especially if the central trilithon was the first to be raised, as is probable.[1] Stone 56 is the great leaning pier; its tenon is in perfect condition, and should be compared with that of stone 55, which has been chipped off, and is almost indistinguishable. When falling forwards, stone 56 heeled over to one side, and its fall was arrested by the Blue-stone 68, against which it leans. The *fourth trilithon*, 57 and 58, with impost 158, lies prostrate—it has fallen outwards—all three stones remain unbroken; they show clearly the manner in which the impost was secured by tenon and mortice. The trilithon fell January 3rd, 1797. W. G. Maton, M.B., F.S.A., in writing to Mr. Lambert, F.R.S., gave the following account:—[2]

"Some people employed at the plough, full half-a-mile distant from Stonehenge, suddenly felt a considerable concussion or jarring of the ground, occasioned, as they afterwards perceived, by the fall of two of the largest stones and their impost. The weight of the entire trilithon has been estimated at seventy tons; the immediate cause of the fall was a rapid thaw succeeding a very deep snow."

Dr. Maton gave also the following account of the fall of this trilithon to Mr. Browne, of Amesbury, who published it in a little book on *Stonehenge and Abury*, p. 18:—

"It was the habit of persons, waiting the commencement of fairs in this part of Wiltshire, to take up their abode in this part of Stonehenge for some days, as a defence against the inclemency of the weather. In the autumn preceding the fall of this trilithon, amongst others who availed themselves of this protection were some gipsies, who, not content with a position behind this trilithon on the level ground, made an excavation in the chalk to obtain a lower position. On quitting Stonehenge,

[1] Mr. Fergusson, in *Rude Stone Monuments*, p. 94, suggests a more fanciful theory for the holes in question. The account above given, is the view taken by the Rev. W. C. Lukis, *Proc. Society of Antiquaries*, vol. ii, 1881-1882, p. 147, and it explains the peculiarity in a simple and satisfactory manner.

[2] *Archæologia*, vol. xiii, p. 103.

the effect produced by this proceeding was that of causing an extraordinary accumulation of moisture behind the trilithon, in the rainy and snowy seasons of autumn and winter. . . . This naturally weakened the foundation of the trilithon on its outward side to the west, and at length, as already stated, it fell in that direction after being observed for two or three days to be out of its perpendicular position."

*Fifth Trilithon*, 59 and 60, with impost 160. Stone 60 is *in situ;* there is a large cavity in the back of it. Both pier 59 and impost 160 have, in falling, broken into three pieces, 59*a*, 59*b*, and 59*c*, and 160*a*, 160*b*, and 160*c*.

When this occurred is unknown. We learn from a drawing of Stonehenge, in the Manuscript Department of the British Museum, a copy of which is given, that it was before 1574.

*The Inner Horse-shoe or Inner Blue-stones.*—The prostrate Blue-stone 67, near the Altar-stone, is noticeable for being somewhat larger than others, and 68, which supports the great leaning stone, for having an even groove running the length of its western side.

*The Altar-stone.*—This stone lies nearly flush with the ground, and immediately in front of the central trilithon, with which, however, it is not placed parallel; consequently, it is not at right angles to the axis of the building—that is to say, with a line passing through from the opening of the central trilithon to the tip of the Sun-stone. According to Mr. Maskelyne, "it is a grey sandstone composed of quartz sand and silvery mica, and some dark grains (possibly hornblend); such a stone might be obtained from the Devonian or Grey Cambrian rock, and other situations. There is just such a rock at the top of the old red sandstone cropping up no further off than Frome." Many small pieces of the Altar-stone have been found in and around the building, showing that it has been trimmed on the ground.

*The Slaughter-stone* has the peculiarity of lying obliquely with the axis. The stone lies flat, and is irregular in shape; on its western side there is a deep notch, and near this an irregular

hollow or basin in the rock; the sheep in the neighbourhood are well acquainted with this peculiarity, and when passing hasten to inspect it, for after rain it is sure to contain a pool of water. The rock somewhat raised at its centre suddenly shelves towards this basin. The end nearer the Sun-stone is shaped to a point by a row of holes sunk in the stone, see Plan IV.

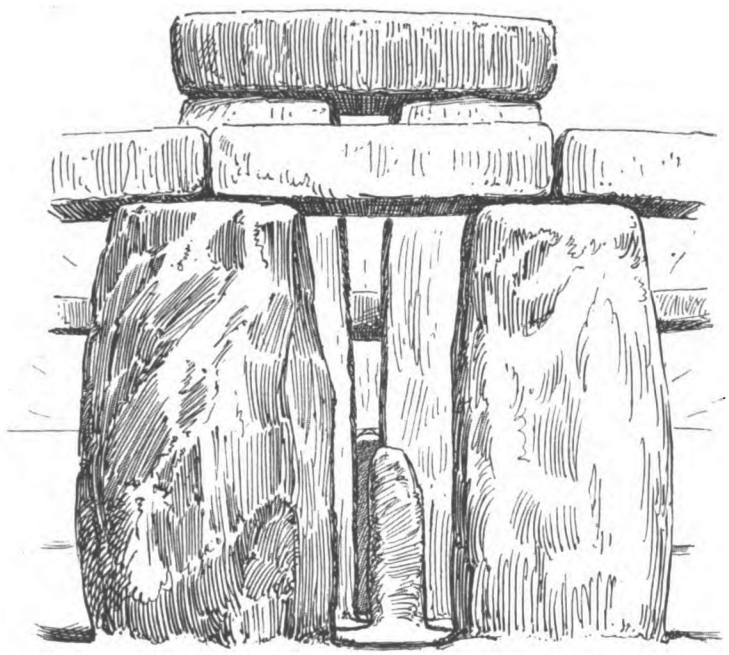
*The Friars Heel, the Heel-stone, Sun-stone, or Index-stone.*—By means of this huge unwrought rock the temple is set to the rising sun at the summer solstice. A foolish mediæval legend is attached to it: the Devil, when engaged in setting up "the Stones" which he had carried away from Ireland, is said to have thrown it at a mocking Friar, hitting him on the heel. "It may have been called the Heel-stone," observes Professor Flinders Petrie, "from Anglo-Saxon *helan*, to hide or conceal, just as a cromlech at Portisham, Dorset, is called the 'Hel-stone'." He adds that the words refer to *horizontal* covering.

The rock is 16 ft. in height, and there is no reason to believe it has shifted from its original position; the manner in which it marks the midsummer sunrise contradicts such a supposition; a further reason is that it appears to be purposely so inclined that its apex should be above the side of its base nearest the temple.

*The Axis.*—Viewed from the centre of the Altar-stone, the Sun-stone appears occupying the centre of the opening formed by piers 1 and 30. The line from the Sun-stone to the spectator would, if continued, strike the great leaning stone 56, therefore the opening of the central trilithon was to the east of such line; and, if as Professor Petrie remarks, this line marked the direction of the sun's rays when first seen at the midsummer rising, then the trilithon opening could never have had anything to do with the rising sun, which is unlikely. Moreover, no point on this line from Sun-stone to centre of Altar-stone gives a centre for the enclosing Sarsen circle; we conclude, therefore, that the rising sun was observed through this opening; the line

passing through it to the tip of the Index-rock is the Axis, and the centre of the temple is on it. From what has been said, it is obvious that it passes nearer to pier 1 than to pier 30, and nearer to pier 16 than formerly it did to pier 15; hitherto no one has attempted to account for this remarkable peculiarity in the design.

*The Stones and Mounds of the Earth-circle.*—The stone to the



Restoration, showing Axis.
The Tip of the Sun-Stone appearing above the large Blue-stone, 67; Centre of Cleft coincides with West Side of Blue-stone 40.

west is *in situ;* that to the east has fallen over in an easterly direction. Dr. J. Smith, writing of Stonehenge in 1771, mentions the latter as then standing. He adds: "it leans very much towards the ditch."[1]

The two mounds are very slightly raised and spread into the Earth-circle; at their centres are cup-like depressions in

[1] Dr. J. Smith, *Choir Gawr*, p. 51.

the soil. They have both been excavated; beneath the western mound Sir R. Colt Hoare discovered a simple interment of burnt ashes, the other yielded no results. The mound with the interment has the addition of a ring, so shallow, however, that few persons would notice it without their attention was specially called to the fact. It will be noticed that stones and mounds alternate, stone faces mound, mound stone; also that

Showing how the Axis of the Temple is given by the Sun-stone and the central Trilithon.

a line from the corner of the western stone, *in situ*, to the cup of the eastern mound opposed to it, just touches the outer circumference of the Sarsen circle.

Such a line is lopsided with the Axis—that is to say, the measurement from the near corner of the stone to the Axis, when applied to the opposite side falls somewhat short of the cup; the arrangement will be readily understood by reference to Plan IV. The corner of the stone makes an angle of $22\frac{1}{2}°$, or

$\frac{1}{16}$ of a circle, with a line from the centre at right angles to the Axis; this was first pointed out by Professor Flinders Petrie.

Such are the dispositions and characteristics of Stonehenge, and it is hoped that the description given, aided by the accompanying plans and illustrations, will render them clear to the reader.

The question arises, Have stones been occasionally carried away for the requirements of the neighbourhood?

The above is a copy of the earliest existing drawing of Stonehenge, from a MS. in the British Museum, 28,330, in Dutch, entitled *Corte beschryuinghe van d'enghelandsche gheschiedenissen* (*tot.* 1574) *vergadert unt de beste chronyeschryuers*, by L. D. H. Paper, late sixteenth century, folio.

Drawing, p. 36. Outline drawn with a pen; details lightly tinted in water-colours.

In spite of some errors and omissions, this interesting illustration (now for the first time published) shows much recognizable character in the drawing of the stones. The


VIEW OF STONEHENGE, FROM CAMDEN,
Under Heading of "Belgæ."

spectator is supposed to be looking towards Amesbury; in the distance a building is seen on the summit of a hill. A knight on horseback advances towards the central trilithon, which is in a perfect condition, as also is the western trilithon.

The stone against which a man leans is No. 60, the standing pier of the northern trilithon; the cavity at the back of it is drawn, though not being darkly-tinted it has the appearance of being another stone or perforation.

This bird's-eye view shows signs of having been executed from a sketch done on the spot; a mistake in perspective has caused the draughtsman to show stone No. 60 as belonging to the outer circle, the piers of which are properly drawn. The fallen pier of the same trilithon is also very incorrectly given. If this fallen pier had been drawn in correct perspective, it would have been difficult not to make it look like a short upright stone; the original sketch would show the end only, which would be unintelligible, without the sketcher changed his position and drew it sideways.

Pier 16 is fairly well drawn, but here also the perspective is at fault; its base should have been placed much higher.

We learn from the well-executed engravings given in Inigo Jones' work that, with the exception of the fall of the western trilithon, the changes that have since occurred to Stonehenge are very slight. It is interesting to observe the unique stone, No. 11, represented with its slight lean out to the south precisely as we see it to-day. The three stones, 37, 38, 39, of the Blue-stone circle are shown as a distinct group, the two Horn-stones being nearer to the centre than the stone they flank. This group has since suffered by the further fall of the pier 14; in a water-colour drawing by J. Britton, 1813, it is shown as in the days of Inigo Jones.

The ground-plans given by Wood, architect, of Bath, by Hoare and Smith, also show us that stones have not in modern days been abstracted from the ruin. A model of Stonehenge in the Sir John Soane Museum may also be mentioned; although

the Museum does not contain a record of its date, it must have been executed some time in the last century, as the western trilithon is shown standing.

Professor Flinders Petrie remarks: "No stones are missing since Wood's plan in 1747."

## The Chips.[1]

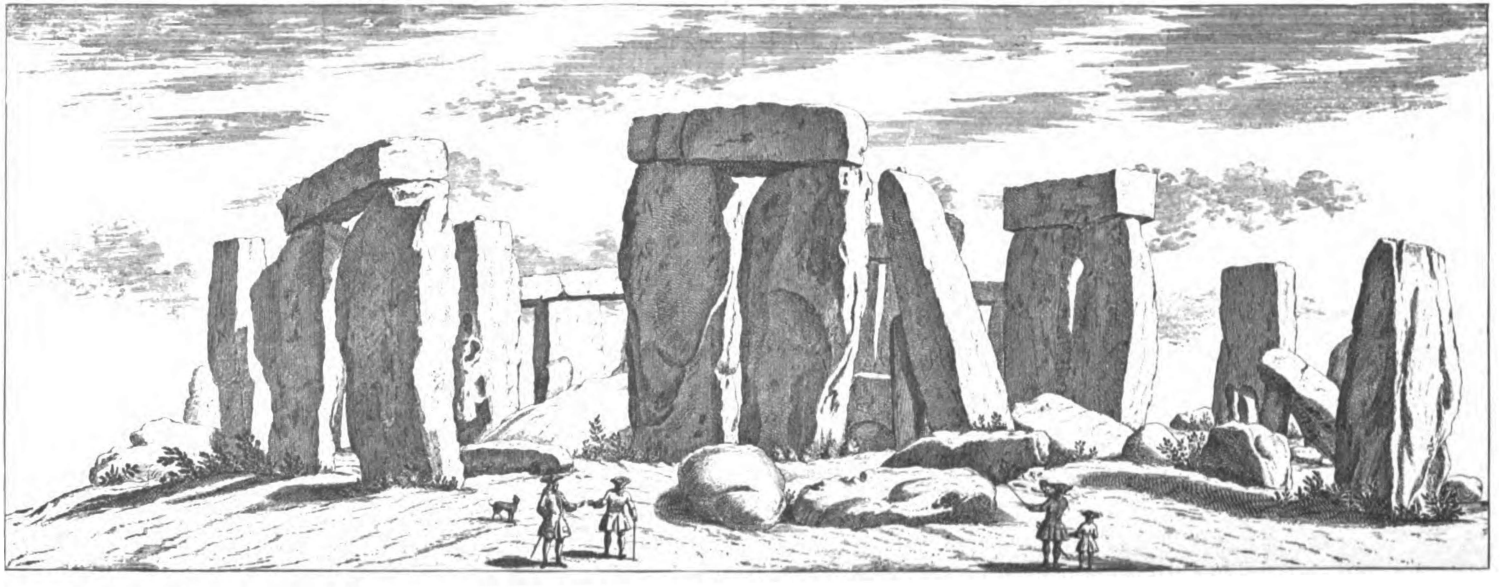
Between four and five hundred chips of the stones used in the construction of Stonehenge have been found by searching beneath the surface of the soil within the area of Stonehenge or in adjacent cart-ruts, and a few have been discovered within the barrows; these have been carefully examined, and many have been cut for the microscope.

The Blue-stones offer the more numerous specimens, showing that the larger Sarsens were trimmed previous to removal, being thus rendered easier to transport, the working of the tenons being probably reserved till after arrival at their destination.

Barrow No. 16 (according to Sir R. Colt Hoare's numbering, *Ancient Wilts*), a little to the west of Stonehenge, was first opened by Stukeley, who discovered within it chippings of the Sarsens and Blue-stones. It was subsequently re-examined by Sir R. Colt Hoare, who says that "it contained the bones of two skeletons which had been deposited on the floor, with animal bones and several pieces of stag horns, as well as some fragments of Sarsen stones, similar to those of the great trilithon of Stonehenge. This barrow contained also an interment of burnt bones deposited in a fine circular cist, and with it was found a spear-head of brass in good preservation, and a pin of the same metal. We found also the chippings of stones mentioned by Stukeley." "On removing the earth from the cist, we found a large piece

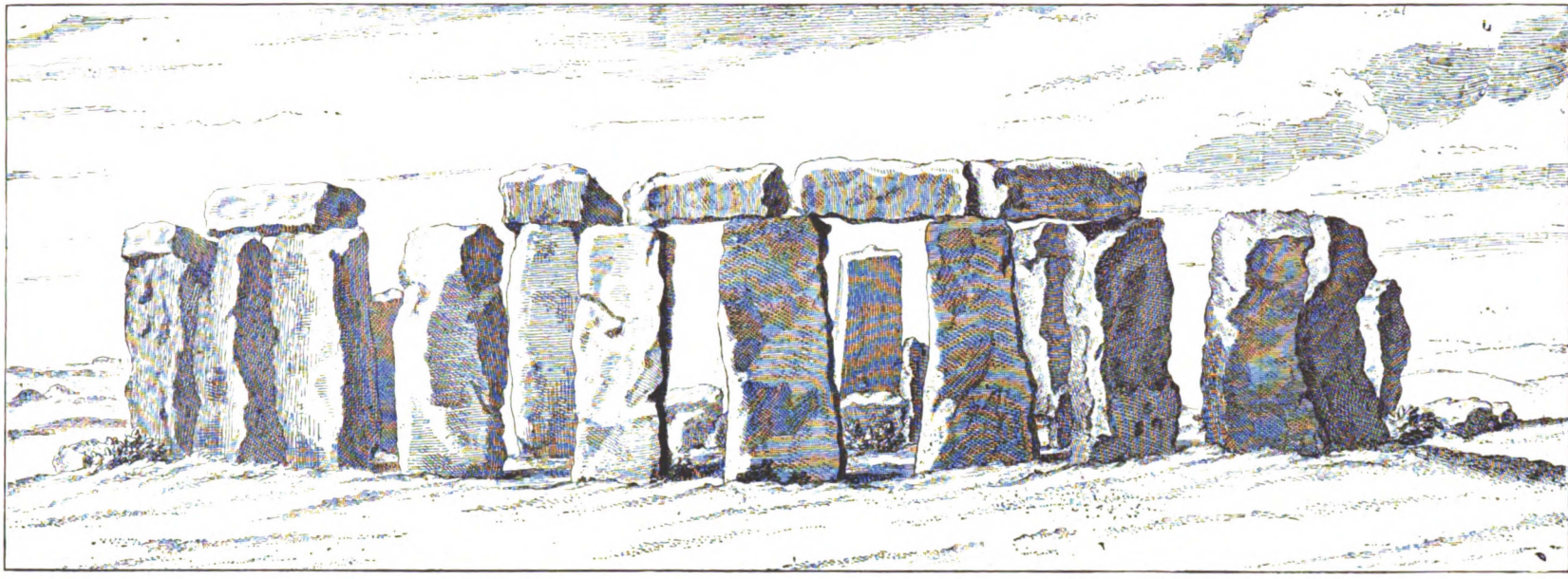
[1] For full particulars respecting the chips, see article by W. Cunnington, *Wilts Arch. Mag.*, December 1883, vol. xxi, p. 141.

FROM INIGO JONES.—COMPARE WITH VIEW FROM POINT I.



FROM INIGO JONES.—COMPARE WITH VIEW FROM POINT II. Showing Western Trilithon, since fallen, *in situ*.

FROM INIGO JONES.—COMPARE WITH VIEW FROM POINT III.



FROM STUKELEY.—COMPARE WITH VIEW FROM POINT IV.

of one of the Blue-stones of Stonehenge, which Sowerby, the naturalist, calls a Horn-stone."[1]

Blue-stone chippings have also been discovered in Barrow No. 23, to the east of Stonehenge, though in what part we are not informed.

Chippings of two distinct varieties of rock foreign to the neighbourhood, but, at the time of discovery, unlike any known stones at Stonehenge, were discovered by Mr. H. Cunnington in Barrow No. 41, about a mile distant from Stonehenge, in the direction of the western end of the Cursus. Some were a soft rock, a soft, calcareous schist; others of a very hard dark quartzite, with grains of feldspar; and splinters of this hard rock have also been found within the temple.

The stump of the soft stone from which the chippings have been struck off has been found beneath the turf; it belongs to the Blue-stone circle, and is marked on the Ground Plan I, S.

The parent stone of the hard quartzite chips has not yet been discovered. A fragment of rock (its position is marked by a dotted line) is known, by probing the soil, to exist beneath the turf nearly opposite to the soft stone; to this possibly they may belong.

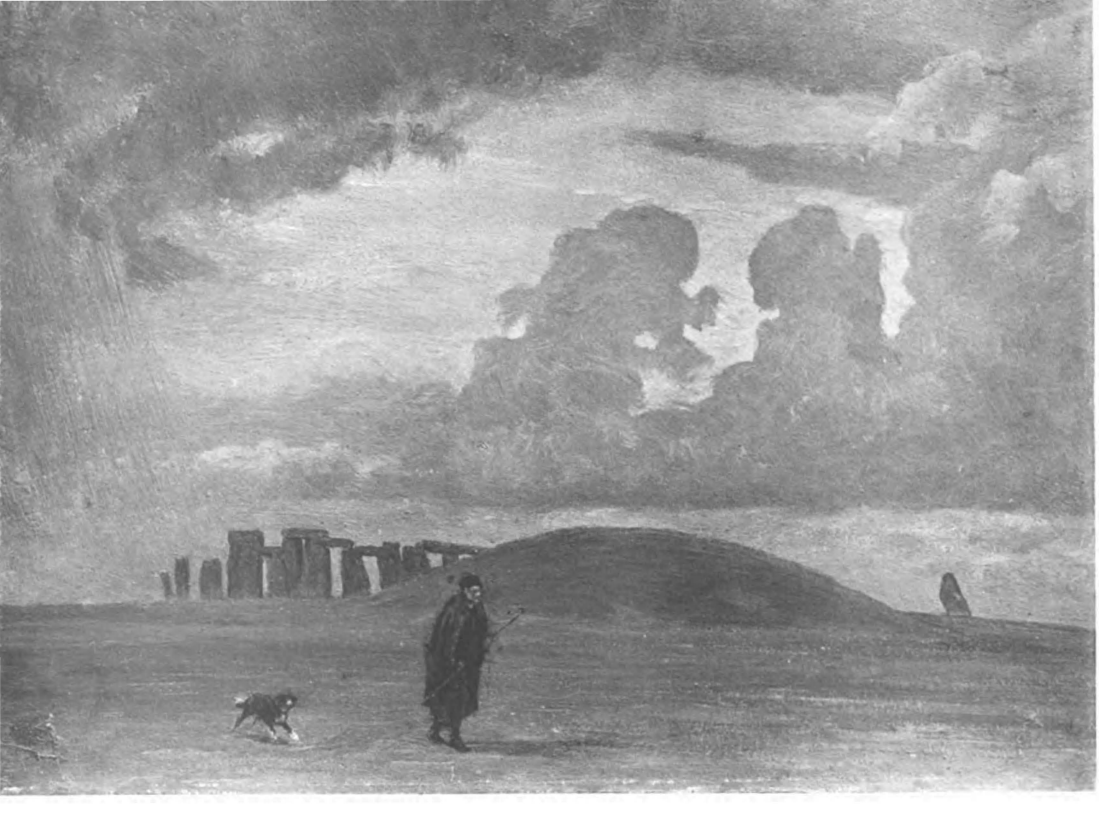
In Barrow No. 42 there has also been found an interment of burnt bones, with a brass pin and part of its handle, deposited in a neat and perfect urn.

Amongst the numerous chips examined three or four specimens are said to belong to rocks foreign to the neighbourhood, but not known at Stonehenge, from which we may infer that a few of the smaller stones have been removed, or that other fragments may yet remain covered by turf.

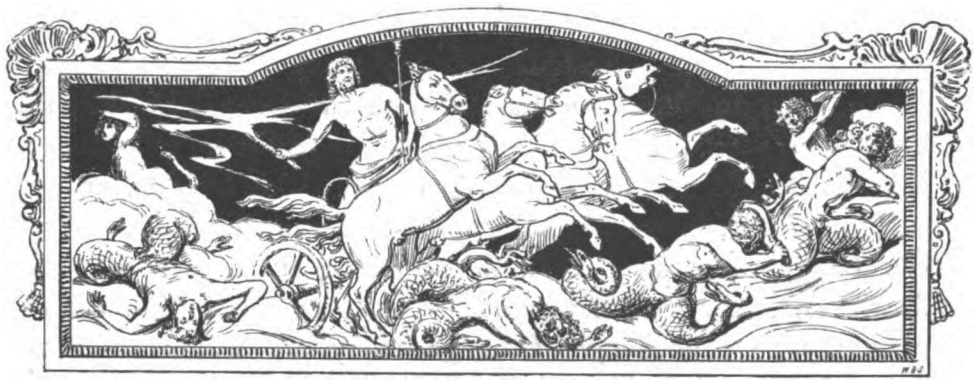
A covered fragment of a Blue-stone lies beside pier No. 52; formerly it helped to form the inner Blue-stone ellipse. "Its base", says Mr. W. Cunnington, "is embedded in a concrete-like substance, which has apparently been produced by ramming into

[1] See Sir R. Colt Hoare, *Ancient Wilts*, p. 164, Plate XVI.

the hollow round the stone, when it was erected, a quantity of soft chalk mixed very freely with small flints (chalk and flint constituting the natural subsoil of Stonehenge), and with numerous fragments of *all* the different kinds of stone of which the building is composed. By the subsequent infiltration of rain water, chemical compounds have been introduced which have filled up the interstices, solidifying the whole in the course of ages into the tough, concrete-like mass found round the foot of the obelisk."



STORM-CLOUDS AT STONEHENGE.



CHAPTER II.

# Description of the Earthworks.

---

## The Barrows or Tumuli.

TRULY, it would be difficult to select a prospect more dismal and forlorn than that offered by a desolate down in stormy weather; nevertheless, under favourable atmospheric effects, when Stonehenge Down is diversified by the flying shadows of spring clouds, or when traversed in summer time by majestic thunder clouds, or when its russets glow beneath the glory of an autumnal sunset, the scene is not only beautiful, but one of much solemnity, and the impression produced is not a little heightened by the numerous monuments of the dead which stud the land in every direction.

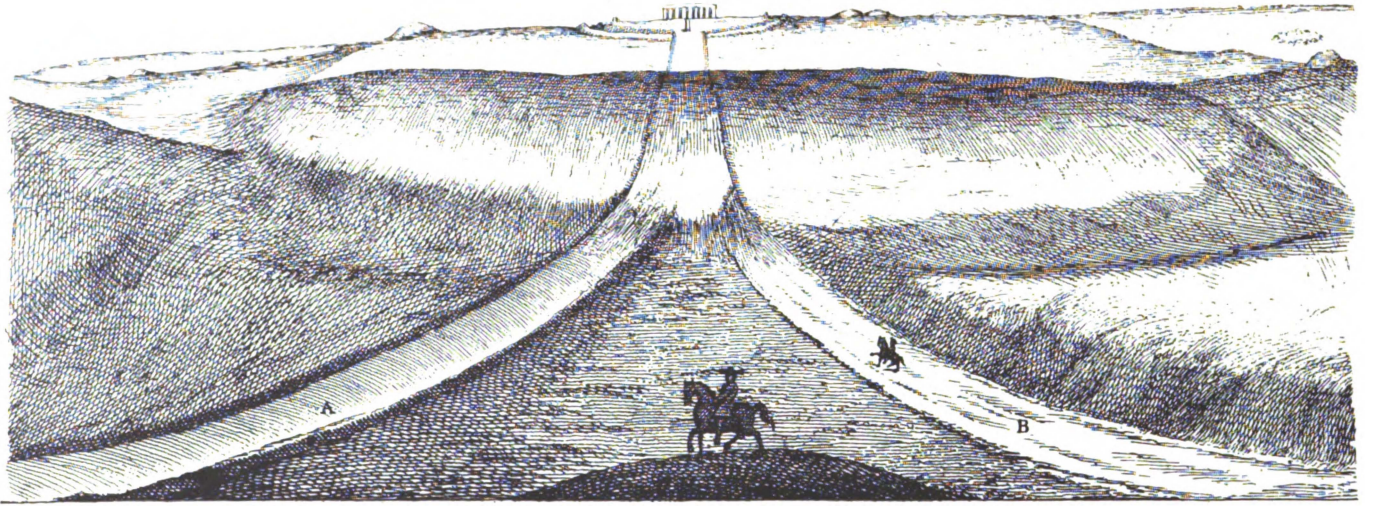
*Their Distribution.*—In the immediate vicinity of Stonehenge several faintly-marked mounds are discernible, and a conspicuous barrow lies a few hundred feet distant to the east; to the south

a row of tumuli crown a distant ridge; another important group lies to the north-west. As many of these turf-covered mounds are but slightly raised, they are not easily recognizable at a distance; it is only upon intimate acquaintance with the locality, or by studying the Ordnance Map, that the number of these monuments can be appreciated. There is no perceptible order in their distribution, nor are they specially congregated in immediate proximity to Stonehenge, although many are within sight of it; to the east of the River Avon, as well as to the west, barrows abound.

They dot the slopes of Beacon Hill, and two miles distant from the village of Bulford, in a north-easterly direction, on a down named Silk Hill, they are as closely clustered as anywhere in the more immediate neighbourhood of Stonehenge; thus the impression is produced that the whole of this district, so unusually rich in grave-mounds, must for some unknown cause have been specially selected as a place of burial, and was the necropolis of confederated tribes, or of some powerful kingdom. A large well-formed tumulus, encircled with its ditch, is a monument not devoid of grace or dignity, and is seen to best advantage when the sun nears the horizon.

The barrows in the vicinity of Stonehenge have been excavated, and their contents minutely examined; and the articles thus discovered have, as is well known, been matter for careful study by experts. Though some barrows were opened and examined as early as the year 1722 by the Earl of Pembroke, aided by Dr. Stukeley, it was reserved for Sir R. Colt Hoare to undertake a thorough and scientific investigation, and the results of his labours are to be found in the sumptuous volumes published by him, entitled, *Ancient Wiltshire.* "He has given a more or less precise record of the opening of 465 barrows in the neighbourhood of Stonehenge."

To the north of Stonehenge the down is traversed by various alignments or avenues of great extent. The first to be observed is:—




FROM STUKELEY.—A. COMMENCEMENT OF LONG AVENUE. B. CURSUS AVENUE.

### The Avenue, or the "Approach."

It is orientated to the midsummer sunrise, and points 50° east of North point; it leads uninterruptedly to the circular space formed by the Earth-circle in which Stonehenge stands, the enclosing bank being discontinued in this direction. It is noteworthy that the Sun-stone, as well as the Slaughter-stone, are not placed in the centre of the Avenue or Approach, but lie towards the eastern side of it. The Avenue is made by two parallel confining ditches, the earth having been thrown inwards so as slightly to raise the roadway; these ditches, though shallow, are distinct.

The Avenue thus formed descends the gradual incline of the down, until at about 1,500 ft. from the Sun-stone the ditches become indistinguishable; here the descent is more rapid, and leads to a gentle valley in the down where the Avenue divided into two branches.

It is now impossible to trace this point of division with any certainty; in 1880 Prof. Petrie fixed it at 1,800 ft. from the Sun-stone.

The fork or division of the two branches is marked on the Ordnance Map of 1817, but on that dated 1877 it is omitted as no longer recognizable.

One branch turned off sharply to the right and ascended the opposite slope of the down; the other led to an enclosure which has been named the Cursus.

Sir R. C. Hoare, *Ancient Wilts*, p. 158, says: "The length of the Avenue from the ditch round Stonehenge to the spot where it branches off is 594 yards, and from thence it is visible about 814 yards up the hill."

### The Cursus Avenue.

This is now completely obliterated; the direction it formerly took is shown by the formation of the land, for it followed the

little valley just mentioned, which curves round in the direction of the Cursus, which is at no great distance.

Sir R. C. Hoare says: "The northern branch appears undoubtedly to lead towards the Cursus, though its traces become very faint soon after it has quitted the eastern line up the hill; it seems to have pursued a bending course towards the Cursus, but I could not perceive that it pointed to any decided opening in that work."

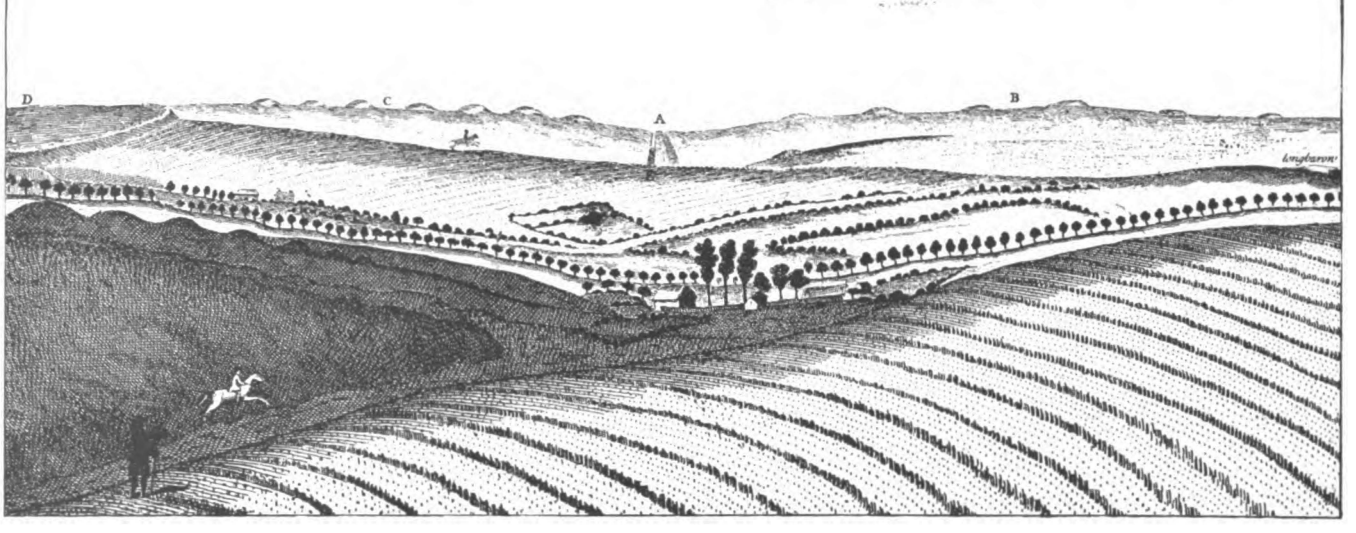
### The Long Avenue.

The branch which turned to the right, after ascending the hill forming the eastern slope of the valley, went over its crest, passing the long line of tumuli, named fancifully by Stukeley the Seven Old, the Seven New King Barrows, and continued in a straight line in the direction of some high land to the north of Vespasian's Camp.

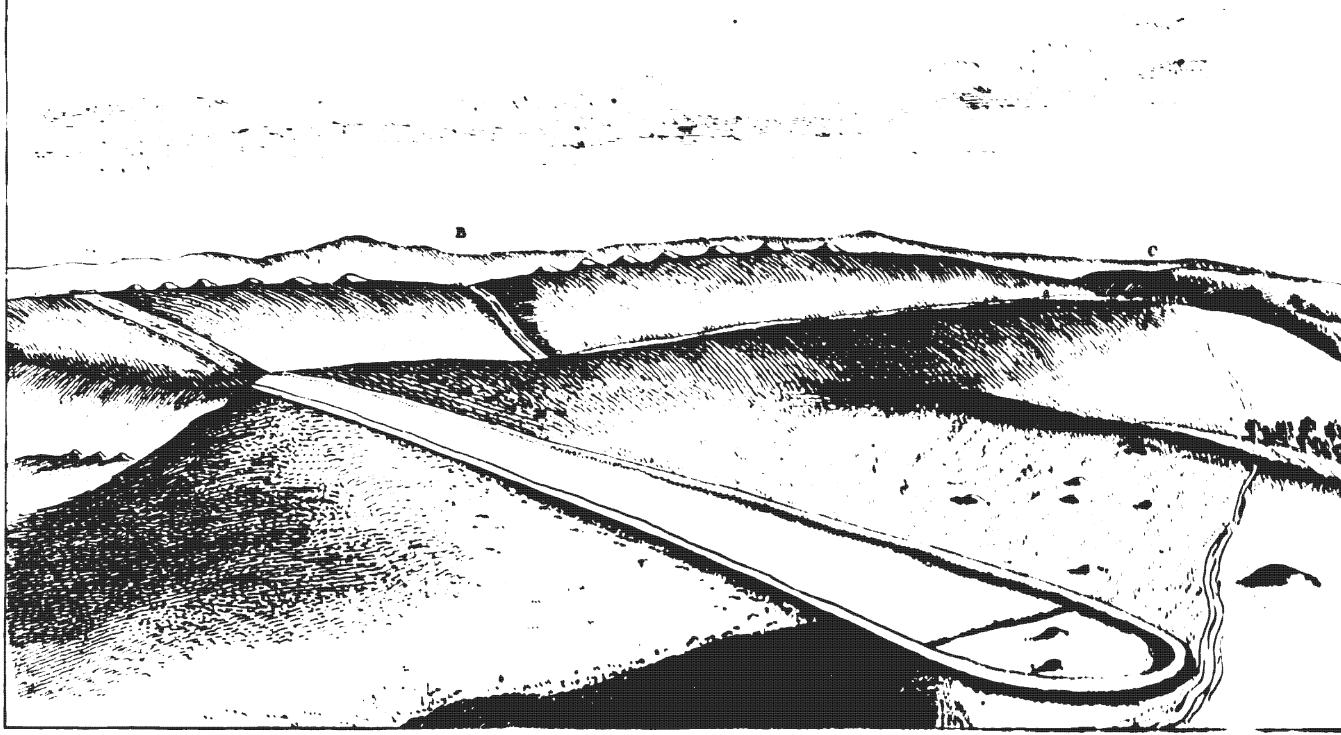
The plough, year after year at work with its obliterating shear, has long since completely effaced all traces of this Avenue, and we have to rely on Dr. Stukeley's account, written a hundred and fifty years ago; he was at considerable pains to illustrate it, and fortunately described it carefully, and by giving the distance of its ditches from the tumuli between which it passed on the crest of the hill, has succeeded in recording its direction.

### The Parallel Banks.

At 1,200 ft. from the Sun-stone, "the Approach" is intersected at an angle approximating roughly to a right angle, by parallel banks about 2 ft. in height and 40 ft. apart. The roadway thus formed continues about 600 ft. to left and right; to the east it is continued by a causeway across the little valley already spoken of, and it is used by carts passing this way, required in the cultivation of fields to the west of the Avenue. What is curious is, that these banks reappear well-defined beyond the arable, and continue,




FROM STUKELEY.—A. LONG AVENUE. B. AND C. OLD AND NEW KING BARROWS. D. DIRECTION OF STONEHENGE.




FROM STUKELEY.—WESTERN EXTREMITY OF THE CURSUS. B. LONG AVENUE. C. STONEHENGE.

following the same direction, for about 900 ft. Just in the centre of this distance the roadway runs against a tumulus, which is crossed by one of the banks, whilst its ring causes two trenches to cross the roadway. What the meaning of this may be I have failed to learn ; the parallel banks are not mentioned by Stukeley, nor are they marked on Sir R. Colt Hoare's map ; and as these careful observers could not have failed to notice them had they existed in their day, we may conclude that they have been made since 1812.

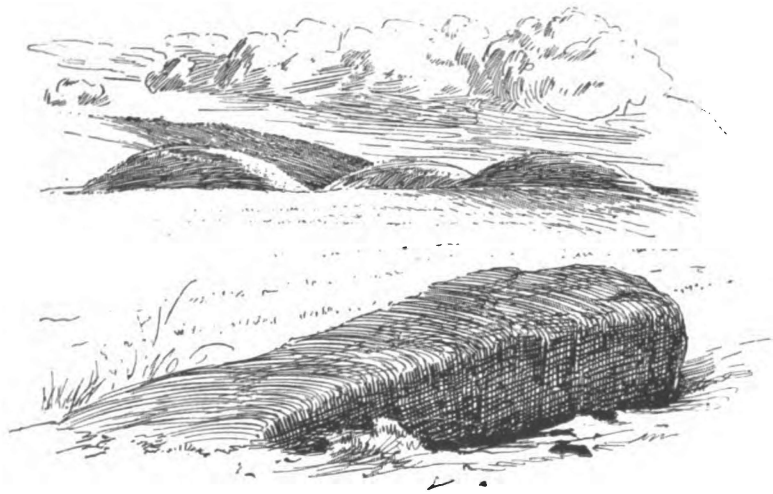
## The Cursus.

This great enclosure lies to the north of Stonehenge, and veers 6° from due east and west : like the Avenue, it is formed by banks thrown up from an outer ditch. It is 9,000 ft. in length, with a width of 350 ft. at its centre, but towards its extremities it narrows ; to the west the southern boundary is irregular ; the northern ditch, on the contrary, makes a fairly straight line. Its eastern end is headed by a long mound, now difficult to trace ; near its western extremity, and within the enclosure, are two small tumuli irregularly placed. The greater part of this earthwork, being on the uncultivated down, is fairly well defined, especially to the west ; to the east it has been obliterated by the plough.

Sir R. C. Hoare, *Ancient Wilts*, p. 158, says : "At a short distance from the western extremity, a slight bank runs across the Cursus, and between it and the end, which is rounded off, there are two barrows irregularly placed within the area." This bank (not marked on the Ordnance), which makes a separate compartment containing the two tumuli, was a stumbling-block for the theory held by Sir Richard that the Cursus was a course for chariot racing ; as he could not suppose the chariots passed over the bank, he presumed that they started from it, and he thought he perceived the termination of the course at the distance of 55 yards from the eastern end.

### The Lesser Cursus.

To the north-west of the great Cursus, and over 7,000 ft. distant from Stonehenge, is an earthwork, apparently the beginning of a second Cursus. It is exceedingly ill-defined, and at 1,200 ft. from its enclosed end the ditches cease, and there is no reason to believe that they were continued further; it appears to be an abandoned scheme for an enclosure similar to the Cursus. Sir Richard detected a bank across this earthwork also.



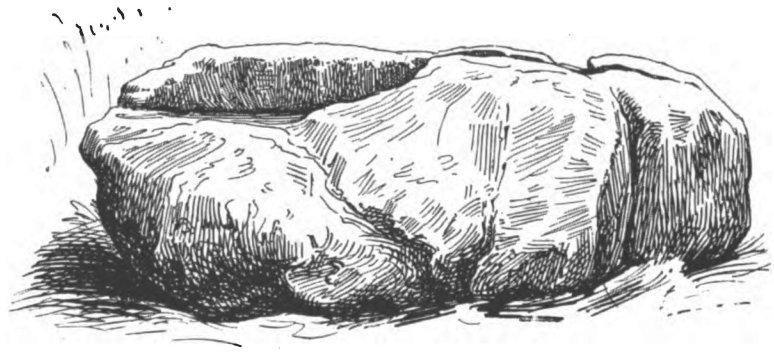
Stone upon Bulford Down. (See p. 26.)

### Solitary Stones.

Dr. Stukeley mentions a large stone 3 miles ($\frac{3}{4}$?) northward in Durrington fields; another in the water at Milford, and another at Fighelden. "They seem", he says, "to have been carried back to make bridges, mildams, or the like, in the river. There is another on the London road, east from Amesbury 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."[1]

[1] Stukeley, *Stonehenge*, p. 37.

The opinion that the isolated stones may have been abandoned when on their way to Stonehenge is contradicted by the consideration that they do not lie *en route* from the district where the Sarsens are found. Considering the labour of dragging these immense rocks across country, it is evident they would follow a direct line; even if originally they lay at considerable distances the one from the other, long before the close of their journey they would have converged to the easiest and most direct route; yet we find them at the termination of their transit far apart.



Stone in Durrington Fields.

### Stone in Durrington Fields.

It lies on high open ground near some isolated farm buildings, half-a-mile north of Vespasian's Camp, where the land begins to decline to the valley of the Avon; the opposite rise is crowned by the range of downs of Beacon Hill, named by Stukeley Harradon Hill, a tract of country studded with barrows. The view is limited to the west by the crest of the down, upon which is the long line of barrows, "the Seven Old and Seven New King Barrows". The stone is fully 6 ft. in length, and about 5 ft. in width, and has a cleavage or ridge running its length pointed in the direction of the Cursus, which is 3,120 ft. distant; it is placed in line with the northern boundary of the Cursus.

### Stone upon Bulford Down.

This is within sight of the last-mentioned stone, and lies on the opposite bank of the Avon, on the open down above the village of Bulford; it evidently once stood erect, and has fallen southwards. (See p. 24.)

### Stone in the River at Bulford.

In the bend of the river below the village, is a large submerged stone; only during drought is any portion of it visible above water; it can, however, in ordinary times, be dimly seen from the bank, which is of chalk, here very steep and overgrown. The country people assert that a metal ring, "turning allways," is let into its upper end. Legend relates that when the Devil brought the rocks of Stonehenge from Ireland, tied together with withes, this stone escaped from the bundle and fell into the river. Its position forbids the belief that it got fixed in the bed of the stream when its passage to Stonehenge was being attempted, for it lies immediately beneath the crest of a very steep bank, and at its most inaccessible point; as the stream sweeps against this, the water must always have been deep at this spot, the open valley would everywhere offer more favourable points for such an operation, especially would this be the case before the Avon was dyked. A boundary stone would have been placed on the brow of the hill; if the stone be a grey-wether, as report says, and as is probable, it may originally have stood on the bank, and "once upon a time", a ring having been fixed in it, it may have been dragged into the stream to moor a ferry-boat. It lies closely midway between the stone on Bulford Down and that in Durrington fields.

### Other Stones Mentioned by Stukeley.

A mile upstream from Bulford is the hamlet of Milford, and two miles further the village of Fighelden. At these places the

submerged stones mentioned by Stukeley are unknown; in the absence of boats search is attended with difficulty.

At half-a-mile from the old London road, and in the direction of the little village of Shipton Bellington, nestled amongst the downs, is a rock about five feet in length, lying on down land but close to enclosed fields. Can this be the stone alluded to by Stukeley as on the London road?

### Durrington Walls and Dwarf-Stone.

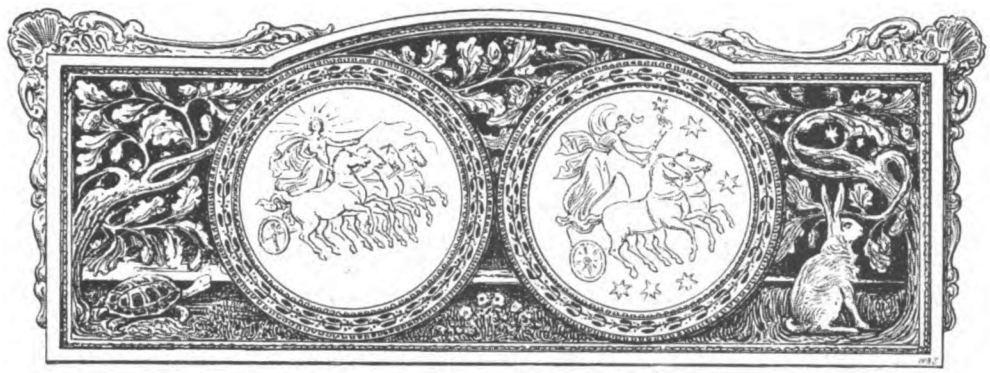
Sir R. Colt Hoare, *Ancient Wilts*, p. 169, derives the name of Durrington from the Celtic word *dur*, water; and within the space enclosed by the bank marked Durrington Walls on the Ordnance, he discovered "fragments of rude unbaked pottery, yet the well burned Roman earthenware preponderates". This shows that the Durrington settlement belongs in all probability to times of Roman dominion. The village commanded that sweep of the Avon which is nearest to the Cursus, and which is here easily accessible and offers a convenient watering-place; immediately below this turn of the stream the ground suddenly rises and the descent to the river is very steep and difficult.

A few feet removed from the bank which encircled this settlement, in a north-westerly direction, is an insignificant stone about a foot high, which apparently marks the boundary of a field. It is shown on the Ordnance. Its position corresponds with the following interesting account given by Sir R. C. Hoare, *Ancient Wilts*, p. 172. He says: "An interment was lately discovered above Durrington Walls by a shepherd, who in pitching the fold found his iron bar impeded in the ground. Curiosity led him to explore the cause, which proved to be a large Sarsen stone, covering the interment of a skeleton, with whose remains these articles were deposited, viz., a spear head chipped from a flint, a small hone or whetstone, a cone and ring of jet like a pulley, and two little buttons of marl or chalk." He appends drawings of these articles.

### Radfin Ford.

According to Stukeley the "Long Avenue" pointed in the direction of an ancient ford named Radfin, which he presumes meant "white road", and had reference to the chalky road which went up from the ford. The tradition of a ford near Radfin Farm is still current, and a bank in the river is pointed to as offering passage "to a gentleman out hunting". It is a well marked bank of chalk and small stones, and extends about two-thirds way across the stream, where it disappears in deep water. There may, as tradition asserts, have been a ford at this point; the bank in question has, however, more probably been caused by a sluice-gate at no great distance from it.

THE HEEL-STONE OR SUN-STONE.



CHAPTER III.

# An Inquiry into the Meaning of the Antiquity.

ACCORDING to a tale derived from ancient chronicles, and which we meet with in Spencer's poem of the *Fairie Queen*, Stonehenge is a monument erected to honour the memory of British princes massacred at Amesbury through treachery of Hengist the Saxon; a story accepted as history, up to the time when King James I commissioned Inigo Jones to draw up an account of Stonehenge.

That eminent architect was unable to accept for truth the mixture of ancient tradition and legend which till then had done service as history; and being, moreover, incredulous that the ancient Britons were ever masters of sufficient skill to enable them to erect such a structure, he cast about for others more capable, and concluded that Stonehenge is a Roman work in the ancient Tuscan style, dedicated to the god Cœlus.

Thus breaking away from accepted tradition he not only showed himself imbued with that inquisitive and critical spirit which is the sap of the tree of knowledge, but led the way for that long series of attempts which have been made to force the ruin to yield its secrets, to inform us in regard to the obscure circumstances of its origin, and the aims and sentiments of those who were at such pains to construct it.

Information respecting Stonehenge has been sought from various sources :—

1. From study of those ancient records to which reference has just been made. A full account of the Amesbury story will be found in Chapter IV, where it is discussed along with other theories.

2. From study of objects discovered by digging within the precincts, and within the adjacent barrows. References to finds unearthed at Stonehenge are given with the list of authors at the end of the book.

3. From study of the nature of the rocks of which the ruin is composed; a matter already touched upon when describing the stones.

4. By attempting to date the structure by exact observation of its orientation.

*If*, originally, the pointing of the Axis to the midsummer sunrise was absolutely exact, precision would in the course of centuries be lost, owing to the slow reeling motion of the earth on its axis, a phenomenon named the precession of the equinoxes. Therefore, assuming perfect exactitude of pointing at starting, it becomes possible to date the central trilithon and index stone by this motion. Prof. Flinders Petrie has made such a calculation, and the date which emerges from his computations is 730 A.D. $\pm$ 200 years. A result also criticised in Chapter IV.

5. From a comparative study of megalithic monuments found in this and in other countries; and by comparing the stone circle with circular tomb and primitive round hut.

The limited experience and meagre resources of primitive

tribes are accompanied with a poverty of invention resulting in a certain degree of analogy between the primitive dwelling, the round hut; the barrow, the house of the dead; and the sacred stone circle, presumably the house of the gods.

*Domicile.*—Large upright slabs of stone arranged in circles, once forming the foundation of huts, are still numerous on some parts of Dartmoor. Mr. Stevens, in his work *Flint Chips*, has pointed out the similarity of the circular winterhouses of the Esquimaux and Siberians to the Scandinavian "gang grifter" or passage graves, and believes, in common with Prof. Nilson, that the latter are but a copy or adaptation of the former; and Mr. A. Evans has further remarked that the entrances to such dwellings are oriented facing the rising sun "for the inmates to be awakened by the first morning rays, in a land where, during a large part of the year, the hours of daylight are few in number".[1] The British round hut has been treated of by Prof. Boyd Dawkins.[2] Dr. O. Schrader[3] concludes that the most usual form of the primitive European hut was round. "The Teutonic huts represented on the triumphal column of Marcus Aurelius are round." "So, too, were the dwellings of the Belgæ and the Celts."

*The Barrow.*—The excavation of the Stonehenge barrows has shown that the customs of cremation and burial were both alike practised. "In some instances", says Dr. Thurnam, "the primary interment exemplifies the first form of burial, in others the case is reversed, and in several barrows the interment of unburnt and burnt bodies were in such close contact that it was more or less difficult to determine which was first in order of time."[4]

Cremation represents the later mode of interment, introduced possibly from a knowledge of its being practised by more civilised

[1] J. A. Evans, *Archæological Review*, "Stonehenge", January 1889, p. 314.

[2] *Early Man in Britain.*

[3] *Prehistoric Antiquities of the Aryan Peoples*, p. 338-347; translated by F. B. Jevons.

[4] John Thurnam, *Archæologia*, vol. xliii, p. 312.

nations, but the older form in vogue in this country before the arrival of the Celts was continued along with the later fashion, which seems to express, says Mr. Boyd Dawkins, "a faith in the dead being purified by being passed through fire".[1]

Inhumation, as practised by the Celts, has been shown to be significant of a faith in a life hereafter. The doubled-up posture of the swathed body within the grave is, it has been maintained, none other than that of the unborn infant, and was imposed "when the body was about to re-enter the bosom of the universal mother, as the symbol of a belief, not only in a life to come, but likewise in that of the resurrection of the body".[2]

The dead were for the most part deposited on the meridian line, with the head to the north, and consequently with a south aspect, this has been thought to have reference to the position in the heavens of the mid-day sun. Mr. Borlase has pointed ou that the distribution and internal arrangements of barrows in Cornwall give evidence of Sun worship.[3]

The mode of interment observed in the Stonehenge round barrows is usually the placing of the swathed and contracted body in a simple grave or cist excavated in the chalk; this occupies the centre of the mound which has been heaped over it; secondary interments have in many instances been found in other parts of these barrows.

We are indebted to Mr. Stevens' study of the earlier "long barrows" for pointing out the significance of such grave-mounds with reference to Stonehenge. These have within them a circular chamber containing cists led to by a subterranean gallery, the portal of which consists of three stones more massive than those of which the chamber and gallery are constructed. This portal, or trilithon, is sealed by a monolith. The long-barrows also

[1] *Early Man in Britain*, p. 367.

[2] Dr. Thurnam, *Archæologia*, vol. xliii, pp. 321, 324. He quotes this as the opinion of M. Troyon, and as held long previously by others.

[3] W. Copeland Borlase, "Typical Specimens of Cornish Barrows", *Archæologia*, vol. xlix, p. 182.

enclose dolmens which consist of three upright blocks of stone with a fourth superimposed to form a roof. The supporters are placed close together, and smaller stones aid in preventing the earth from falling into the chamber thus formed which encloses and protects the dead body. Dolmens are also found free standing, as independent monuments, and it is probable that these formerly served the purpose of altars.[1]

Thus there is evidence of analogy between barrow, stone-circle, and circular hut.

We find a barrow with an eastern gallery which leads to a circular stone chamber, within which, packed in cists, are the tenants of the tomb peacefully reposing in the sleep of death. An eastern avenue conducts to a temple consisting of a circular earth mound, within which is a stone circle, within this again certain stations marked by gateways (the trilithons). A circle of stones forms the base of the primitive hut, and beneath its domed roof we can picture the household, after their day's labour, sitting round the central fire; in turn, the occupants retire to repose in beds disposed in a horse-shoe form, and like the tenants of the cists, they lie with their feet towards the centre. They sleep. At length the eastern sky grows luminous, the rays of the rising sun enter by the crevices of the wicker doorway to wake the household to the duties of a new day; then the men depart to their labours, to tend the cattle, to plough, to sow, or to reap.

From study of skulls found in "long"[2] and "round barrows", it has been concluded that these were raised by different races,

[1] See E. T. Stevens, *Stonehenge Excursion*, p. 115. Much information respecting dolmens, accompanied with numerous illustrations, is given by Mr. Fergusson in *Rude Stone Monuments*. The Rev. W. C. Lukis believes all such monuments were once enclosed by mounds. See *On the Class of Rude Stone Monuments which are commonly called in England "Cromlechs", and in France "Dolmens"*. For Mr. Fergusson's comments on this subject, see *Rude Stone Monuments*, pp. 44, 167. For account of large numbers of free standing dolmens, with evidence of their having served as altars, see C. R. Conder, *Heth and Moab*, p. 266, 1885.

[2] For "Long Barrows" see *Archæologia*, vol. xlii, p. 160, article by John Thurnam, 1867; for "Round Barrows" see *Ibid.*, vol. xlii, p. 285, 1868.

the constructors of the "long barrows" being the ruder and more savage.

A "long barrow" is visible from Stonehenge, about a mile and a half distant to the north, crowning Knighton Down; there is another about a mile to the west; the nearest free standing dolmen lies between Avebury and Marlborough.

If such comparisons as have been made be held applicable to Stonehenge, then we are entitled to argue further; that if the arrangements of the primeval dwelling influenced the design of the primitive temple, the association of the household probably influenced the conception of the manner in which the divinities were associated to honour whom the temple was constructed.

The struggle for existence enforced a certain form of social order, the only form of which men had knowledge, nor is it likely that they exercised their imaginations by forming conceptions of social order outside their own experience.

The primeval form of property in land compelled brothers to live together on the undivided heritage. This circumstance, together with the widely spread custom of female infanticide brought about that dismal condition of the archaic household recorded by Julius Cæsar. He says of the Britons, "Ten and even twelve have wives in common to them, and particularly brothers among brothers, and parents among their children, but if there be any issue by these wives, they are reputed to be the children of those by whom respectively each was espoused when a virgin."[1]

At the head of the primitive household was the House-father, who administered the corporate property, and conducted the family worship, making daily offerings at the hearth to the House-Spirits. By his side was the House-mother, who prepared the meals; the bond of union Mr. Hearn insists was community of domestic worship, all the members of the household being alike under the protection of the House-Spirit.

[1] J. Cæsar, *Gallic War*, Bk. v, chap. xv. This passage is quoted by J. F. McLennan, in his *Studies on Ancient History*, "Primitive Marriage", p. 106.

"The house community", says Dr. O. Schrader, "dwells together, but 'the real house, the place of the fire', is occupied solely by the house administrator and his family, whilst round it in a horse-shoe crescent are grouped the apartments which are bedrooms of the other members."[1]

We find, therefore, the following organization :—

House-Spirit.
House-Father and House-Mother.
(Five) sons—brothers, married to a woman of foreign kindred, with whom they cohabit in succession according to certain rules.

This order might suggest the following hierarchy :—

An Invisible Spirit of Heaven.
Sun-World Father.
Moon-World Mother.
Five Planetary Gods influencing Mother Earth, the seasons being dedicated to them.

## Stonehenge Analogues.

Antiquities curiously resembling Stonehenge have been discovered in countries bordering the Mediterranean, and in Arabia.

An account of such a ruin, and which there is good reason to believe was a temple devoted to Sabean worship, *i.e.*, the worship of the heavenly orbs, is given by Mr. Palgrave in his *Journey through Central and Eastern Arabia ;* and two similar monuments have been discovered by a Jesuit missionary in the same part of the world.

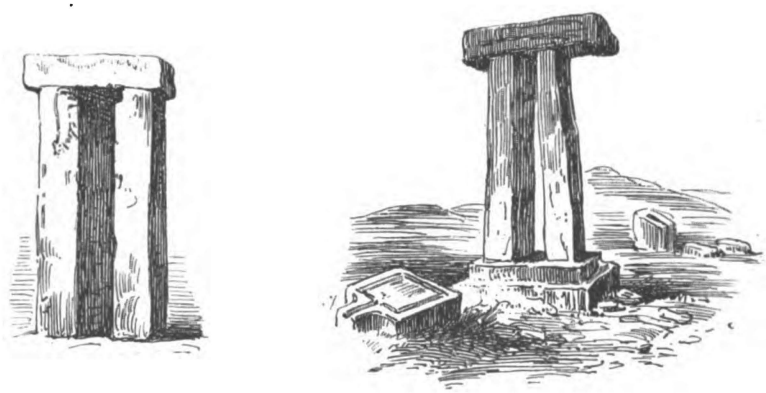
Mr. Palgrave closes his account with these words : "in fact, there is little difference between the stone wonder in Arabia and

[1] W. S. Hearne, *The Aryan Household*, p. 63 *et seq.* ; Dr. O. Schrader, *Prehistoric Antiquities*, p. 394.

that of Somersetshire, except that one is in Arabia, the other, though the more perfect, in England."[1]

We have not drawings or plans to enable us to compare these eastern monuments with our own in matters of detail, but the resemblance must be striking to have called forth the remark quoted. Mr. Palgrave says that in the province in which these antiquities are, there was, in the commencement of the 11th century, an official restoration of the ancient Sabean or Planetary Worship, which was maintained for about 300 years.

There are curious antiquities also in North Africa. Dr.



Trilithons in Tripoli (from Dr. Barth's *Travels*).

Barth[2] mentions trilithons and stone circles existing in the neighbourhood of the city of Tripoli, and gives drawings and very careful and precise measurements. Of one trilithon he says, "it has a most surprising resemblance to the most conspicuous part of the celebrated Celtic ruin of Stonehenge; my distinct impression on the spot was, that the structure was a rude kind of sundial combining the vertical and horizontal principle, the

[1] G. Palgrave, *Journey through Central and Eastern Arabia*, p. 251. See J. Fergusson, *Rude Stone Monuments*, p. 444; and criticism on the discovery by Rev. W. C. Lukis, *Proceedings of Soc. of Antiquaries*, vol. ii, 1881-82, p. 148.

[2] Dr. Barth, *Travels in Northern and Central Africa* (see pp. 58, 60, 61, 71, 74, 197, 204). Mr. Fergusson alludes to some of these discoveries, *Rude Stone Monuments*, p. 411; for trilithons in Syria, *Ibid.*, pp. 100 and 445.

religious character of the whole structure can scarcely be doubtful from the nature of the flat stone, the channel in which was certainly intended to carry off the blood of the victim." He attributes the erection of these monuments to the Berbers under Carthagenian influence. At another desolate spot, he found on the site of an ancient village "the ruins of a large building of hewn stone, about 140 yards square, besides six pairs of pilasters, together with their imposts, but some of them are lying at present on the ground." He says the square building, combined with the groups of trilithons, "has a ground-plan of an almost regular Roman temple." The trilithons he observes "could never have been intended as doors or passages, for the space between the upright stones is so narrow that a man of ordinary size could hardly squeeze his way through them."

He also mentions "a stone circle laid out very regularly with large slabs of stone", and near by "there are rude ancient sculptures deeply graven on rocks, one represents a bullock between two half human deities", the first has the head of a bull, the second a head which reminds him of the Egyptian ibis. Another sculptured design represents an ox with its head protruding into a large circle.

Isolated trilithons exist in Syria, they stand near tombs, and are of late date, A.D. 195 and 222; they are carefully finished with architectural mouldings.

According to Dr. Phené, there are several trilithons in France. "They seem", he says, "to follow a line from Africa, through Gaul, and then by the Atlantic shore and islands to Britain; a trilithon being found on the coast of Brittany, at St. Nazaire, and one in the Ile d'Ouessant. They are rare in any case, but examples can be found on the old route of tin traffic or near it."[1]

Stonehenge offers the only example in this country of the free standing trilithon. The Syrian examples are of comparative late date, and the origin of those found in Africa and France is shrouded

[1] Dr. Phené, "Existing Analogues of Stonehenge", *Wilts Archæological Mag.*, vol. xix, 1880.

in obscurity ; if they are of high antiquity, it still by no means follows that those of Britain are of the same date ; that they have the same significance wheresoever found, can hardly be doubted.

Such is a sketch of the different lines that studies on Stonehenge have followed ; and references have been given to enable the reader to amplify his information on these topics if so disposed.

An attempt will here be made to supplement these sources of knowledge by yet another ; viz., by study of the comparative dimensions of the various parts ; and of the method employed in setting out the design.

Other stone circles in this country have this characteristic in common ; they appear to have been constructed in a more or less haphazard fashion, regardless of precise measurement. The impression produced by Stonehenge is different. It is difficult to believe that the roughly trimmed boulders, which are piers, could have supported a ring of lintels, so that these should form a fit and sightly circle, without the exercise of considerable ingenuity and method ; indeed, it is precisely the sense of disturbed order which makes the ruin so impressive and interesting. Moreover, there are outlying stones which obviously have not been placed at random, but for some particular purpose. The experience, therefore, of any passing observer justifies investigation on these lines.

Moreover, every visitor to Stonehenge must have been struck with the fact that the ruin lies by the side of a prominent and wel formed ringed tumulus ; he will probably therefore feel little surprise should he learn that evidence is forthcoming which connects Stonehenge with this barrow.

Should it be that he has observed the Avenue and the Cursus ; it is strange if no suspicion arose in his mind that these also may be connected with the original purposes of Stonehenge.

The impression which the antiquity produces on visitors is, that they look upon the ruin of one structure or design, not on several.

Stonehenge, however, consists of several separate parts, con-

structed of different kinds of stone, and the general opinion of writers has been that these parts have been constructed at different epochs. The reverse conclusion is now arrived at, viz., that all the stones were erected at the same time. In the first instance, the unity of the design will be demonstrated by the proportions which the measurements of the several parts bear to each other. This unity could not be proved if the outlying stones, viz., the "Sun-stone", the "Slaughter-stone", and the "Stones of the Earth-circle", were omitted from consideration. These, it will be shown, are inseparable from the temple. The unity of the design proved, the corollary is that all the stones were erected at the same time.

This conclusion is confirmed by the fact that chippings of the Sarsens, Horn-stones, and Blue-stones, have been found in a barrow (No. 16, Hoare's *Ancient Wilts*) a little to the west of Stonehenge, together with a bronze spear-head and an interment of ashes; also by the fact that small chippings of *all* the stones have been found embedded in a concreted substance at the foot of the Blue-stones.

It should be noted that there are but four Horn-stones at Stonehenge, and these are the smallest stones. They can have supplied but a scanty supply of chippings, a minute fraction of the total number.

The Horn-stone within the barrow proves that the Sarsens, Blue-stones, and Horn-stones, received a dressing at the same time, and that specimens of these rocks were selected and placed within the mound when, having been freshly broken off, the difference in the quality of these rocks was discernible, and when this difference was of significance. Doubtless these chippings of the sacred rocks were regarded as charms, having magical power to avert evil from the spirit of the dead.

The significance of the avenues and the great enclosure named the Cursus, and their relation to Stonehenge, has hitherto been insufficiently considered, the Cursus having been regarded as an independent earthwork. These alignments can be shown to be appendages of the temple, and to have been constructed at the

same time. The proof rests in the orientation of the Avenue or Approach, and the position occupied by the Sun-stone with respect to the prominent tumulus to the east of the temple, and to the Cursus.

For the argument, that Stonehenge is *not* of prehistoric antiquity, it is necessary to show :—

Firstly, that the bronze spear-head, found in the barrow containing Stonehenge chippings, does not necessarily imply a very high antiquity.

Secondly, that the majority of the tumuli were already on the Down when Stonehenge was erected.

Firstly, that iron was rare in Britain at the time of the invasion we learn from J. Cæsar's *Commentaries;* and the trivial nature of the imports into Britain during the Peace of Augustus, and the barbarous character of the natives, is mentioned by Strabo. Thus it is difficult to believe that weapons of bronze were altogether discarded at the time of the conquest. That some tribes were armed with weapons of iron, others with those of bronze, and that others, again, used both, was the opinion of Dr. Thurnam, than whom no one is a better authority on the Wiltshire barrows.

Secondly, that the majority of the tumuli were on the land when Stonehenge was erected, is proved by their distribution, and by the alignments which traverse the barrow-studded Down. To this we shall presently return when speaking of the earthworks.

The trilithon is a feature which distinguishes Stonehenge from other sacred circles in this country. It is, indeed, possible that this solitary example of the trilithon is an independent, insular invention derived from the dolmen ; but the accounts that we possess of others in North Africa, in Syria, and in France, and Palgrave's account of the stone wonder of Kaseem in Arabia, lead to the more probable conclusion that this feature of Stonehenge is derived from the south.

If we admit that Stonehenge offers evidence of foreign influence, such a conclusion confirms the opinion that it is of late date, compared with the high prehistoric antiquity usually assigned to it,

because it is impossible to believe the Celts of interior Britain were influenced by peoples under Roman sway before the Peace of Augustus at the earliest. We learn from J. Cæsar that in his day the foreign trade of Britain was in the hands of the Veneti of Brittany; and from the same source, that these people looked to the *north*, not to the south, for guidance in religious matters, and sent young men over to this country to study the tenets of Druidism. This being so, it is incredible that the Celts of interior Britain can have been induced by the Veneti to introduce a feature into their temple which appears to be native to the shores of the Mediterranean. The trilithons, therefore, show the temple to be of comparatively late date.

Tacitus mentions that Agricola, besides being attentive to provide the sons of British chieftains with a liberal education, encouraged the native chiefs to erect temples, in order to reclaim the tribes from their warlike habits. There appears to be no reason why Stonehenge should not be a product of this policy. It is a sacred circle conformably with the traditions of the country, and the same beds of natural boulders from which the great temple of Avebury had previously been constructed, have also supplied the material for the more important parts of the temple of Stonehenge. Although the rocks which compose the latter have received a rough dressing, the execution is very rude, as we should expect it to be. It does not, however, follow that the man who conceived this work, and superintended its construction, was an untutored barbarian; on the contrary, it may well be that he was conversant with ideas current at Massilia, which great centre of learning was resorted to for instruction by Roman and barbarian alike.

## Unity of Design.

The most remarkable feature of the Stonehenge design is the manner in which the temple is orientated to the rising sun of the summer solstice. This is done by means of the central trilithon and the Heel-stone or Sun-stone. At that season an observer

on the Earth-bank, at its point of furthest removal from the Sun-stone, was so situated that the tip of the Sun-stone, which appeared through the cleft of the central trilithon, coincided exactly with the visible horizon, and indicated the position of the rising sun at this season.

The direction of a shadow having been obtained at the solstitial sunrise, it is evident that if a line of any given length, with this direction, were marked on the face of the Down, and the cardinal points determined, a triangle would be obtained, and the relative proportions of its sides could be learnt by measurement. Such a triangle offers us a base for Stonehenge measurements. The axis of the temple corresponds to the direction of a shadow at the midsummer sunrise, and probably indicates a moment considered propitious for sacrifice to the sun-god. Any one standing on this line, beside the Slaughter-stone, would be unable to observe the rising sun, he being in the shadow of the Sun-stone, the Hel-stone, or covering stone; but being on the axis he could receive a signal for the death-stroke from an observer on the Earth-circle behind the central trilithon; and on account of the Slaughter-stone being placed obliquely with the axis one half only of the stone would be in shadow. Thus, provided a clear sun-rise, the sun would shine on the flowing blood of the victim, and this would be construed as a propitious omen.

The distance of the Sun-stone from the Slaughter-stone is 100 ft. A right-angled triangle formed by lines directed to the cardinal points, and a line 100 ft. in length, inclined at an angle representing the orientation of Stonehenge, has a perpendicular of 64 ft.[1]

These proportions determine the measurements of the several parts. Thus the centre of the temple can be fixed by adding the hypothenuse to the perpendicular: as 64 is to 100, so is 164 to 256.2 ft., or four times the perpendicular ($4 \times 64 = 256$ ft.), the distance from the centre to the Sun-stone. From a centre thus

[1] This proportion inclines the axis 50° 12′ from north point. Knighton Down, above which the sun rises, is higher than Stonehenge Down.

determined describe a circle, the point of the Slaughter-stone giving the measure of the radius, and divide the circumference into sixteenths; the position of the corner of the western stone of the Earth-circle in regard to the centre shows that the circle was so divided. Then it will be observed that the most important measurement of the temple, viz., the diameter of the

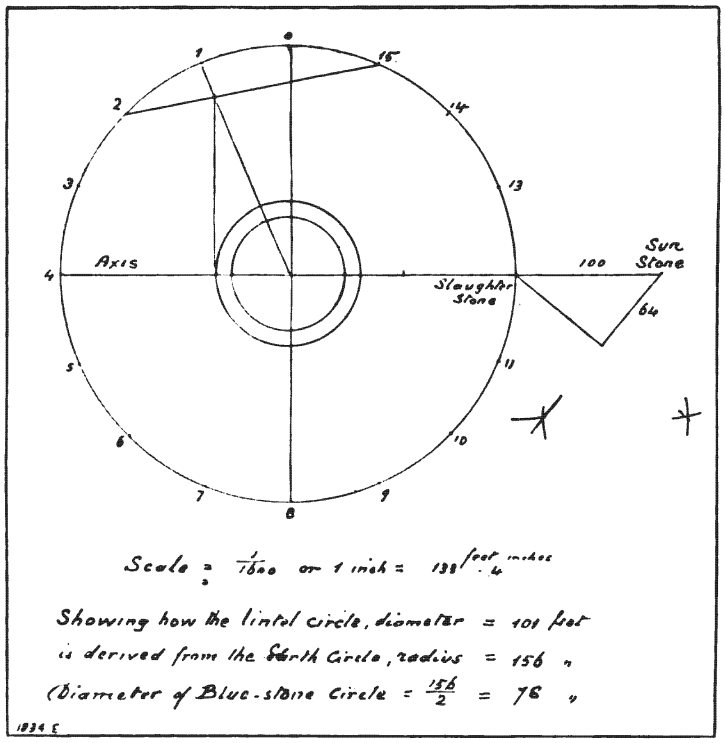



DIAGRAM I.

lintel-ring, 101 ft., results directly from this division of the circle, as shown by Diagram I.

The western stone of the Earth-circle does not, however, agree with the *centring* of the Sarsen piers, but with the *outer face* of the temple. Its placing is explained by Diagram II.

The diameter, A B, is given by the mounds. If the radius of the Earth-circle be measured off twice on the circumference, from B, we obtain the point C. B C is, therefore, the side of an equi-

lateral triangle described within the circle, and the altar is parallel to it. The line C A passes through the western stone of the Earth-circle. D, in line with stone and mound, is determined by prolonging a side of the base-triangle.

The placing of the stones and mounds, which form a quadrilateral figure exactly containing the temple, is thus explained, also why stones and mounds alternate.

It can be shown that all the more salient measurements of

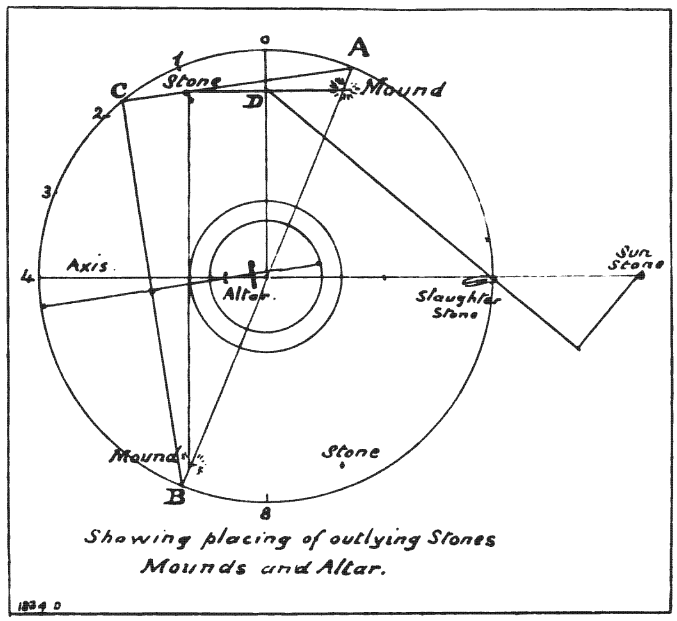



DIAGRAM II.

Stonehenge—the placing of the Sun-stone, Slaughter-stone, and Stones of the Earth-circle, in regard to the centre; the diameter of the Sarsen circle in regard to the centring of the piers which support the lintels; the diameter of the Blue-stone circle; the distance of the central trilithon from the centre; the depth of the horseshoe-figure from central trilithon to choir-screen; and the dimensions of the Altar-stone—that all these measurements are directly derived from the proportions of the base-triangle; and as these are directly due to an observation of the sun, all the salient

measurements of Stonehenge may truly be said to result from an observation of that luminary.

Thus the unity of the design can be proved, the corollary being that all the stones were erected at the same time; which conclusion is again confirmed by the contents of the barrow to the west of Stonehenge, as already mentioned, and by the chippings at the base of the Blue-stones.

We shall return to this subject after considering the Earth-works, when it will be possible to elucidate it in a simpler manner.

### Symbolism of Stonehenge.—The Sarsens.

The characteristic features of the temple are not, however, explained by showing method in the plotting; and these, as they cannot be accounted for by practical or æsthetic motives, must be of a symbolical nature, and connected with the worship to which the temple was dedicated; in the same spirit as our churches are built on the figure of a cross.

Stonehenge is shown to have been a temple not merely by characteristics of design, but by the fact that the Blue-stones of which it is partly constructed have been brought here from a great distance; and without they had been regarded with superstitious reverence they would not have been so brought, because other stones nearer to hand would have answered all practical purposes.

Finds of bulls' heads and harts' heads, and charcoal, repeatedly dug up within the precincts, show that these animals have there been sacrificed.

According to Tacitus, the sacred rites of the Britons were similar to those of the Gauls; and early travellers' tales inform us that the latter worshipped an Earth-goddess with shrill music and noisy rites, in honour of Ceres and Proserpine; and that Druidesses lived apart in companies, devoted to the service of the Moon-goddess. Celtic tribes settled in Gallo-Asia, or Galatia, in Asia Minor, worshipped a supreme "Nature-goddess" or "Moon and

Earth-goddess", and her shrine attained a world-wide fame as that of the Phrygian Cybele, "the mother of the gods."

When her worship was introduced into Italy, the Romans sent a special embassy to Pessinus, "and the rough field-stone which the priests of the place liberally presented to the foreigners as the real 'Mother Cybele' was received by the community with unparalleled pomp." If, therefore, Stonehenge was erected by the primitive Celts, the race which raised the grave mounds which surround it, it seems probable that the rough field-stone which they removed from the Avebury Downs to the brow of Salisbury Plain, was there set up as religious symbols in honour of a Nature-goddess. The accompanying illustration of the goddess Cybele is taken from Montfauçon. She points with her right hand to the earth, in her left she holds a pitcher of water, the turrets which crown her head denote that she is the supporter of towns.

Cybele.

The representation of the Ephesian Diana, a Nature-goddess, is from the same author. She was worshipped not only in Asia Minor, but also in the Greek colony of Massilia—the modern Marseilles. This city was founded by the Phocæans; within the citadel, says Strabo, "are placed the Ephesium and the temple of the Delphian Apollo. This latter temple is common to all the Ionians; the Ephesium is the temple consecrated to Diana of Ephesus. They say that when the Phocæans were about to quit their country, an oracle commanded them to take from Diana of Ephesus a conductor for

their voyage. On arriving at Ephesus they therefore inquired how they might be able to obtain from the goddess what was enjoined them. The goddess appeared in a dream to Aristarcha, one of the most honourable women of the city, and commanded her to accompany the Phocæans, and to take with her one of the statues consecrated in her temple. These things being performed, and the colony being settled, the Phocæans built a temple, and evinced their great respect for Aristarcha by making her priestess. All the colonies sent out from Marseilles hold this goddess in peculiar reverence, preserving both the shape of the image of the goddess, and also every rite observed in the metropolis."[1]

Diana.

She bears a globe in one hand and a crescent in the other; between the bandages animals are pictured; in the middle division a sacrifice to Mother Nature or Diana. "It is believed", says Montfauçon, "that Diana is the same as the Moon, and though in the common public worship these two deities were distinguished, yet we have observed they have been esteemed the same by many; some antiquaries think the crab is placed as the mark of sign Cancer of the Zodiac on account of some relation between that sign and the moon; she is pictured with many paps because she is the nurse of all animals and plants."

The Sun-stone, or Index-stone, which measures the cycle of the year, is probably a symbol of the sun, the primal fountain of life. The circle is a symbol appropriate alike to the sun and to

[1] Strabo, *The Narbonnaise.* Bohn.

the disc of the full moon. When we look for a symbol of the lesser light, the moon, we find her crescent shape and full disc represented in the two figures which form the temple. Conformably with this idea we find the Sarsen circle divided into thirty equal divisions by its piers, as the month (the cycle of time derived from the moon) is divided into thirty days. The lunar crescent and full disc together form a symbol of increase.

The shadow of the Sun-stone at the midsummer sunrise is directed towards the centre of the crescent symbol, whilst the extremities or horns of this figure are pointed in the direction of the Sun-stone. The symbol is appropriate to the season when the land, enjoying the maturity of summer, was fabled to be espoused to her celestial bridegroom, the Sun-god; whilst in August she brings forth her increase. Then the symbol of the season is the disc of the harvest moon, which we find typified in the zone of the temple.

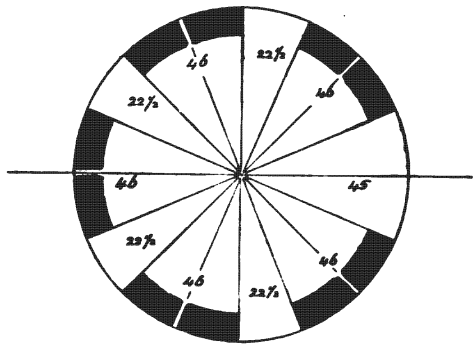
In confirmation that such ideas were once current, we find Irish feasts and fairs, called "Lugnassed", were held in honour of Lug, the sun-god. These were held in the neighbourhood of the great burial-places of olden times in Ireland; and in discussing the origin of the name, Professor Rhys says that "we learn from it that the principal thing the celebration commemorated was the union of Lug, the sun-god, with the land." There appear to have been similar feasts in Britain, and in Gaul, at Lugduna, a town on the Rhone, named after the god.

The orientation of Stonehenge, the relation of the opening of the central trilithon to the Sun-stone, points out to us that a religious celebration took place at the summer solstice; for why should the temple be designed to accord with this particular time if the flock were then absent. If the opening of the central trilithon be significant of a festival, a presumption is raised that so also are the openings of the remaining four trilithons, for surely all these mystical gateways must have a like interpretation, and if so, we ought to be able to date these five festivals by the positions of the openings within the circle.

if the central one be reckoned to indicate the middle of summer, in regard to the division of the year into months, then we find the other four indicate the first of May, or the coming in of summer; the end of August, or the close of summer; the end of October, or the coming in of winter; and the beginning of March, the close of winter and the beginning of spring.

The design fails to indicate a winter festival, and the temple was probably then deserted, as we should expect it to be from its exposed position, and from the inclemency of the season.

The solstice, however, does not occur in the middle of summer, its position with regard to the other four openings appears to




A Circle divided into sixteenths showing Five Trilithons.

be indicated by the Altar being placed to one side of the Axis and obliquely to the central trilithon beneath which it lies. A line passing through the opening of the central trilithon and through the centre of the Altar, shows on the circle the position of the solstice in regard to the placing of the other four clefts. (See Diagram II.)

Thus by the placing of the Altar the openings agree and the symmetry of the temple was maintained.

Such an arrangement suggests that Stonehenge signalises an adjustment of the Celtic festivals to the Roman year, to a year of months of 30 and 31 days, or 360 days plus five feast days.

It has previously been pointed out that the placing of the stones

and mounds of the Earth-circle shows the circle at Stonehenge has been divided into sixteenths; this being the case, if the designer of the temple had wished simply to place five trilithons symmetrically within it, he would surely have proceeded as indicated by the accompanying diagram. Considering the care shown in the plotting, we cannot but believe that attention was paid to the precise placing of the trilithons, which are the most striking features of the structure; the chances against their fitting to the theory proposed accidentally are considerable.

## The Blue-stones.

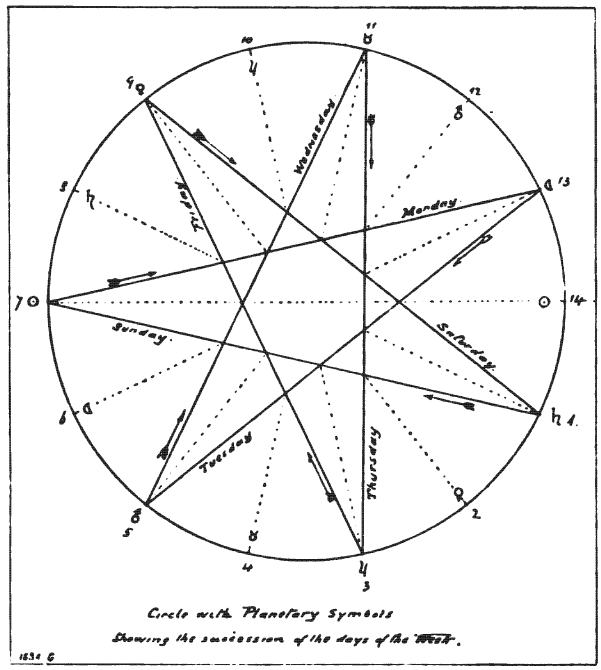
If the placing of the larger stones be concerned with a symbolism touching the celestial deities and cycles of time given by the sun and moon, it must be conceded that the smaller stones (arranged so as to form similar though smaller figures) would be in harmony with the larger, if they, too, were consecrated to the celestial gods, and if their placing was significant of smaller cycles of time, of the division of the month into the week and days.

It is contended that the unusual division of the Blue-stone Circle, and the placing of all the Blue-stones, is due to an ancient astrological figure which is concerned with the planets, and the week of seven days with planetary nomenclature, and which accounts for the order of succession of the days of the week.

The diagram in question shows why there is only one Blue-stone impost, and why it lies where we find it; it accounts for some stones being placed in pairs; why we find a group of three stones in the Blue-stone circle; why two of this triplet, which are Horn-stones, are placed somewhat nearer to the centre than the one they flank. Moreover, it effects a restoration with remarkably little violence. Five stones, though prostrate, occupy their proper positions, and merely require raising, and others are displaced but a few feet.

It appears that very few are missing; the Blue-stones, in this respect, offering an instructive contrast to the Sarsens. This fact

is shown by the placing of the Blue-Stones *in situ, without* inquiring into *the meaning* of their placing. Presuming the Blue-stone Circle to be filled in with stones, so that equal spaces be between them, then the chances *against* stones being taken away *accidentally*, and yet leaving a remainder disposed as we find them, are, according to the computations of Prof. Flinders Petrie, as 5000 to 1.




Circle with Planetary Symbols
Showing the succession of the days of the Week.

If it be conceded that the diagram offers an explanation of the placing of the Blue-stones, it follows that Stonehenge is not of prehistoric antiquity. At the time of the conquest the week of seven days was well known, and coming into vogue, in the south of Europe. Though of high antiquity in the East, it only found its way to Rome after the conquest of Egypt.

I. The planetary diagram consists of a circle having its circumference divided into seven equal parts. The divisional points are joined with seven straight lines. The symbols correspond in their order with the periods of motion of the sun, moon,

and planets round the earth, according to the ideas of the ancients. The Moon, Mercury, Venus, the Sun, Mars, Jupiter, Saturn. The cross-lines show the succession of the days of the week. The dotted lines represent the dawn joining day with day.

Plan III is a ground-plan of the Blue-stones in their present ruinous condition, and shows the Blue-stones restored with the help of the planetary diagram.

Fourteen stations, at equal distances apart, are marked on the circumference of the circle.

Station 1 shows the Blue-stone trilithon restored. It is presumed to be dedicated to Saturn. With the rising sun, a new day, a day dedicated to the sun, commences, and time gives birth to a new cycle, the week, which proceeds from the mystical gate-way. Following the planetary diagram we now cross over to

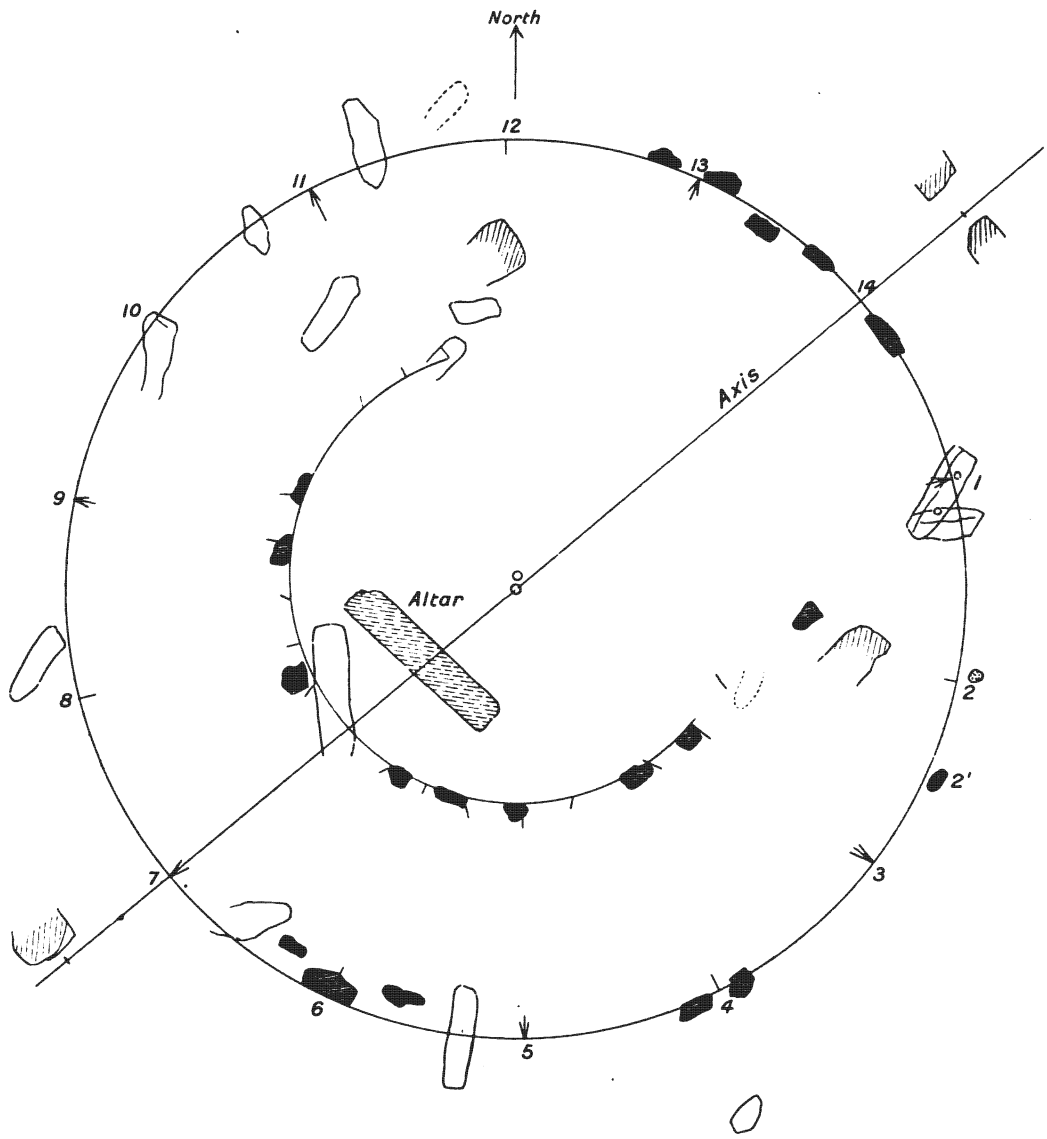
Station 7 on the axis. This is dedicated to the Sun. Day, night, and dawn are the first day of twenty-four hours. The moment which joins day with day is the moment of sunrise. It is here represented by the axis, which joins the day consecrated to the sun with that consecrated to the moon. The line passes between two Blue-stones of the choir-screen (Station 14), and points to the Sun-stone. We again cross over to Station 13, dedicated to the moon. We turn as before, sunways, and find the line of dawn, joining day with day, points to

Station 6. The line passes midway between two Horn-stones, and strikes a Blue-stone. Thus we find two stations, presumably consecrated to the moon, are marked with Blue-stones, each stone being flanked with two Horn-stones, these six stones being *in situ*. In this manner the week can be followed, and all the stations be visited.

The accuracy with which the line of dawn of the day dedicated to Mercury passes between two stones placed close together at Station 4 is noteworthy; also the agreement of the soft schist stump with a station dedicated to Venus.

The only stone which offers difficulty is one marked 2'. According to the planetary diagram we should expect to see

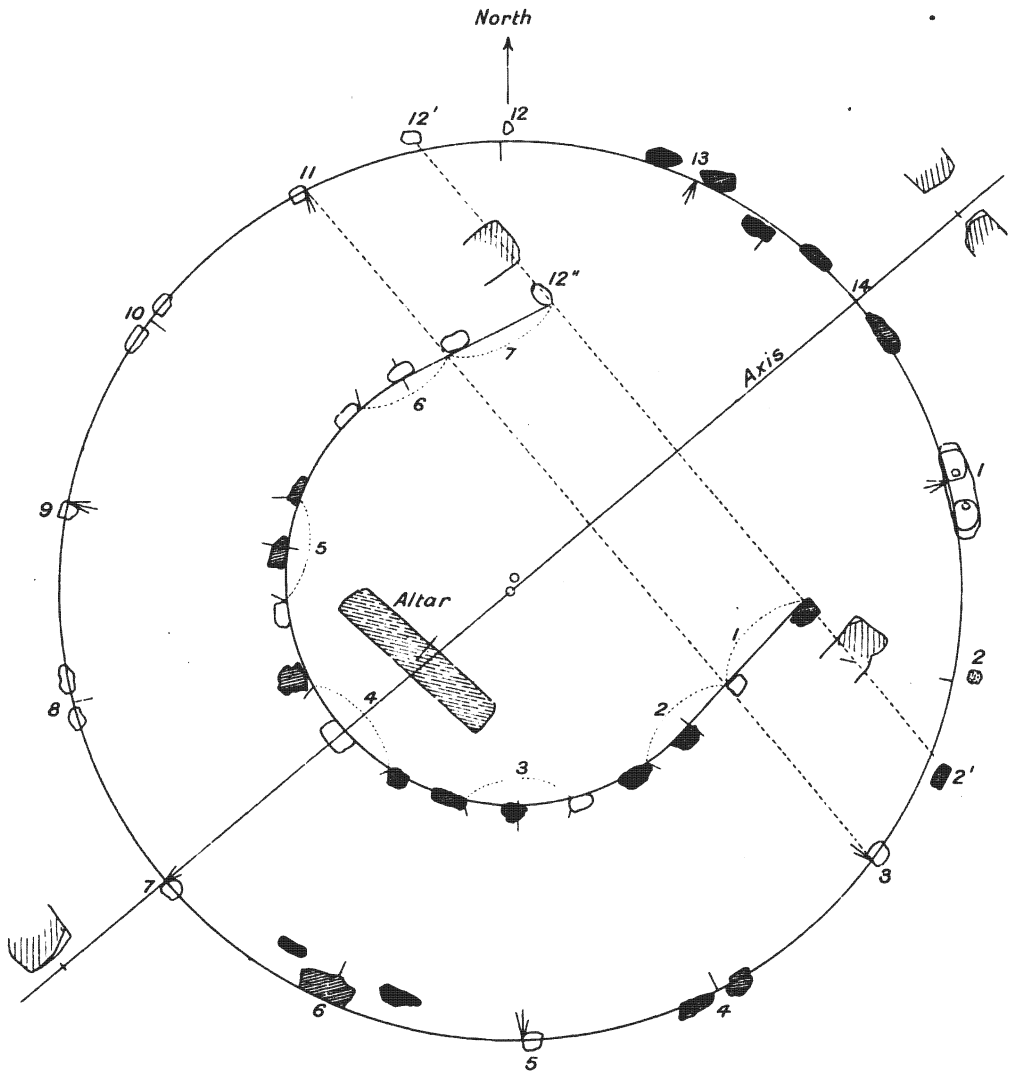
# THE BLUE STONES.




Scale 1/200 or 6 inches = 100 feet.

Blue stones prostrate.
" " in Situ.
Horn stones.
No2. Soft schist stump.

# BLUE STONES RESTORED.




Scale, ~~200~~ or 6 inches = 100 feet.

Blue stones Restored.
" " in Situ.
Horn stones
No. 2. Soft schist stump.

WATERLOW & SONS, LIMITED, LONDON WALL, LONDON

Stations 2 and 12 each marked with two stones, like Station 4. These stations have apparently been marked with only one stone each; and we find 2′ of the circle, and 2″ of the horseshoe, neither of them agreeing with the planetary diagram.

When considering the symbolism of the Sarsens, we found horseshoe and circle to have equivalent meanings; so, too, with the Blue-stone horseshoe and circle.

We find days and lines of dawn pegged out by stones on the inner horseshoe, and by the introduction of stones 2″ and 12″, seven days are indicated instead of only five.

The order in which the days of the week are named is due to a theory of the relative distances of the planets from the earth, inferred from the times of their orbits, and to the consecration of each consecutive hour to a planetary power; the order of hourly dedication agreeing with planetary distances.

The Moon was the nearest planet, then came Mercury, then Venus, then the Sun, which was considered as a planet, finally Mars, Jupiter, Saturn.

| Saturn. | Jupiter. | Mars. | The Sun. | Venus. | Mercury. | Moon. |
|---|---|---|---|---|---|---|
| ♄ | ♃ | ♂ | ☉ | ♀ | ☿ | ☽ |

The order of the days of the week follows from this series.

The first hour of Saturday being consecrated to Saturn, the seventh would be consecrated to the Moon; and so with respect to the 14th and 21st.

The 22nd hour would be consecrated to Saturn, the 23rd to Jupiter, the 24th to Mars, the 25th, or first hour of the following day, would be consecrated to the Sun, which thus receives its appellation of Sunday.

Setting out from the day of the Sun, we find the 7th, 14th, and 21st hours consecrated to Mars, the 22nd to the Sun, the 23rd to Venus, 24th to Mercury, 25th, or first hour of the following day, Monday, to the Moon; and so on.[1]

[1] For account of the week, see François Arago, *Popular Astronomy*. For its spread over Europe, see Sir George Cornwall Lewis, *An Historical Survey of the*

Literature supplies us with but a scanty knowledge of how the week of seven days spread over Europe; but it is evident, as Jacob Grimm has remarked, that it must have taken a firm hold of the populations long before the introduction of Christianity, as the priesthood would certainly have abolished the daily use of the names of the heathen deities had it been in their power to do so.

We are now in a position to give

### Particulars of the Stones.

58 stones of the Sarsen Circle, 30 piers, 28 lintels.
26 ,, ,, ,, Blue-stone Circle (?); this includes 1 impost.
15 ,, ,, ,, Sarsen Trilithons, 10 piers, 5 imposts.
17 ,, ,, ,, Inner Blue-stones.
1 Sun-stone.
1 Altar-stone.
1 Slaughter-stone.
2 Stones of the Earth-circle.

---

121 total.

---

The question arises whether formerly there were other stones belonging to the Earth-circle.

From probing the ground there is some reason to believe that a stone on this bank may once have marked the direction of the axis; such a problematical stone is shown dotted in Stukeley's plan; there is no evidence for the existence of others.

*Astronomy of the Ancients*, p. 304; also Hare, on the names of the days of week in the *Philological Museum*, vol. i, p. 1; and Jacob Grimm, *Teutonic Mythology*, p. 122. In regard to the diagram showing the succession of the days of week, "there were" says M. Arago, "with these cabalistic intersections, certain theories respecting the influence of the heavenly bodies, upon which the astrologers refused to divulge their views".

*Sarsen Circle.*

17 piers *in situ*, 8 prostrate or fragments, 5 missing.
6 lintels *in situ*, 2 fragments, 20 missing.

*Blue-stone Circle.*

12 stones (or stumps) *in situ*, 10 prostrate, 4 missing.

*Sarsen Trilithons.*

5 piers *in situ*, including the inclined pier, which has slightly shifted, 4 prostrate.
2 imposts *in situ*, 3 prostrate.

*Inner Blue-stones.*

9 *in situ*, 3 prostrate, 5 missing.

From this list of missing Blue-stones we may safely deduct two, two pieces of rock are known to be beneath the turf, and there may be others.

We append six restored ground-plans, with notes.

## Restored Ground-plans.

All these plans give 30 piers for the outer circle, in five they are represented as of equal size.

Mr. Fergusson follows Mr. Hawkshaw's excellent survey, and rightly represents pier No. 11 as smaller than others. This, however, has failed to remind him that the stone in question is also shorter than others; otherwise he would not have written as follows: "There seems to be no doubt that the outer stone circle originally consisted of 30 square piers . . . . *it seems equally certain that they were all connected by a continuous stone impost or architrave.*"[1]

The evidence that the Sarsen horse-shoe consisted originally

[1] *Rude Stone Monuments*, p. 90.

of 15 stones is too clear to admit of difference of opinion; it will be observed, however, that in these plans the shape of that figure varies very considerably—Mr. Fergusson's is the most correct.

The differences in the reconstruction of the Blue-stone Circle are marked. Wood gives 29 stones for this part, Stukeley 40, Long 30, Smith 30 + two Blue-stone trilithons, Stevens 30.

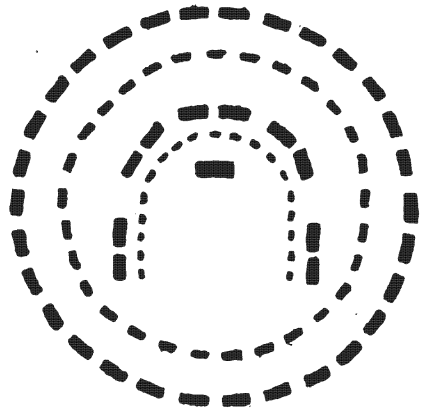
In spite of these differences of number the principle followed in all these cases appears to be identical, which is to reconstruct a circle with stones equally interspaced—an idea strongly contradicted by the placing of Blue-stones *in situ*.

Stukeley shows two stones of the choir screen advanced out of line with others; this is incorrect.

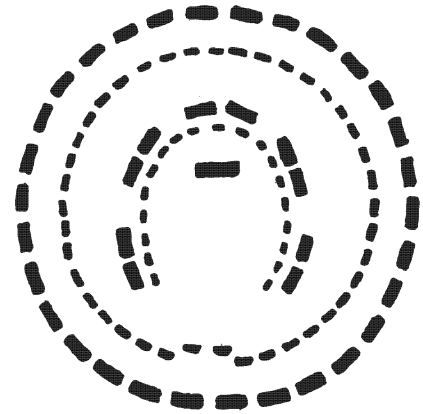
The Blue-stone impost No. 150, with two cups worked in it, and one of its supporters, both lie on the Blue-stone circumference; therefore, when restoring the trilithon, there is no reason to place it *out of line* with other Blue-stones, as Mr. Smith has done. A sentiment for symmetry has led him to suppose that another must have paired with it, although we have no evidence for the existence of such trilithon. He was, therefore, obliged to reconstruct the Blue-stone trilithon, of which the impost remains, *out of line* with other Blue-stones, because the position opposite to that, where it was most reasonable to place it, was already occupied by stones *in situ*, which obviously could never have supported an impost.

Although Mr. Stevens admits that the cups worked in the Sarsens are mortise-holes, similar cups worked in the smaller Blue-stone he calls Elf-pots; it is therefore noticeable that when restoring the temple, he neither leaves the stone with the Elf-pots where he finds it, nor does he find a place for it elsewhere; he thus shows that he does not believe it to have belonged to the original structure, but to have been brought here later for the benefit of the Elves of the neighbourhood; fairy rings abound on the Down.

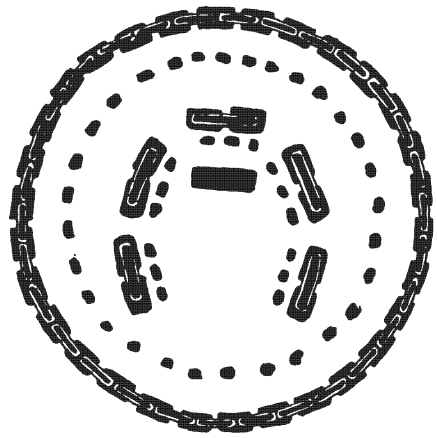
Mr. Fergusson has discarded the plan of filling in the Blue-stone Circle with stones until symmetry be obtained, and appears to be satisfied with the idea that the best way to insure correct



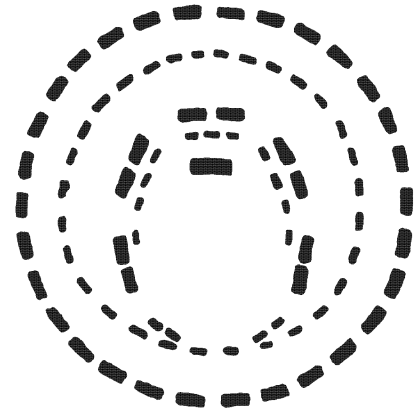
WOOD.



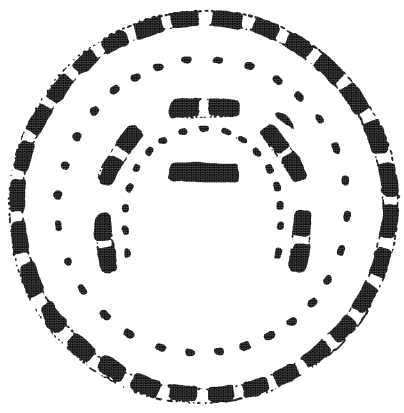
STUKELEY.



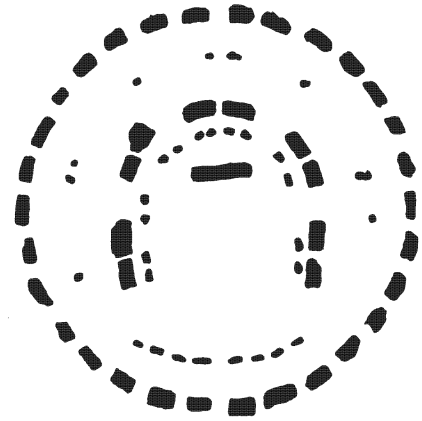
LONG.



SMITH.



STEVENS.



FERGUSSON.

GROUND PLAN OF STONEHENGE RESTORED,

According to the mentioned Antiquaries.

reconstruction is to set up Blue-stones lying on the ground where we find them ; the result, at any rate, is unsatisfactory.

In spite of having Mr. Hawkshaw's excellent plan before him, he has failed to show the group of three stones of this part—a Blue-stone flanked by Horn-stones, the three stones being *in situ;* and it is certainly difficult to understand his motive for placing two Blue-stones side by side touching each other, except it be to show his scorn for symmetry ; and if so, how is it that although Mr. Hawkshaw places a Horn-stone of the choir-screen considerably out of line with its neighbours, Mr. Fergusson restores it symmetrically in line with them.

The Inner Horse-shoe continues the list of contradictions ; it will be observed, firstly, that the shape of this figure varies considerably in the different plans : Wood gives 19 stones, Stukeley 19, Long 15, Smith 11, Stevens 17, Fergusson 14.

Mr. Stevens remarks that the triple arrangement of stones shown by Mr. Long must be incorrect, "for some of these monoliths now standing depart from this arrangement, and occupy the interspaces."[1]

Smith's restoration of this part is also contradicted by the position of stones *in situ.*

Mr. Fergusson restores two recumbent stones beside the northern trilithon ; one of these is omitted in Mr. Hawkshaw's plan ; it is almost hidden beneath the fallen pier of the trilithon. Mr. Fergusson places them symmetrically opposed to another pair of Blue-stones, although he disdains a precisely similar operation when dealing with the Blue-stones of the circle.[2]

In regard to the Altar table, five out of the six plans place it parallel with the central trilithon. Mr. Fergusson shows it correctly, lying somewhat askew to it, and to one side of the axis ; by so doing, however, he acknowledges as untenable a theory he has himself been at some pains to propound, viz.,

[1] *Jottings on Stonehenge*, p. 94.

[2] For Mr. Hawkshaw's plan, see *Rude Stone Monuments*, p. 92. Mr. Fergusson's restored plan is on the following page facing it.

that this stone was once poised on two supporters above the central trilithon.

### The Earthworks.

In old days a large concourse of strangers was, doubtless, attracted to Stonehenge to attend the festivals. It is difficult to believe that British villages can have offered them accommodation; we assume, therefore, that they were obliged to camp out on the plain, in the neighbourhood of the temple, and in the midst of an extensive burial-ground. Respect for the spirits of the dead would forbid strangers from camping on this hallowed ground anywhere where fancy might dictate; therefore, when the temple was erected, an enclosure was constructed. This is named "The Cursus", although a more appropriate name would be "The Fair-field". It is conveniently situated, being near the temple, and within easy reach of the river. For the most part it lies in a slight depression of the Down, so although but a short distance north of Stonehenge, it is much out of sight, and the hubbub of the encampment was kept apart.

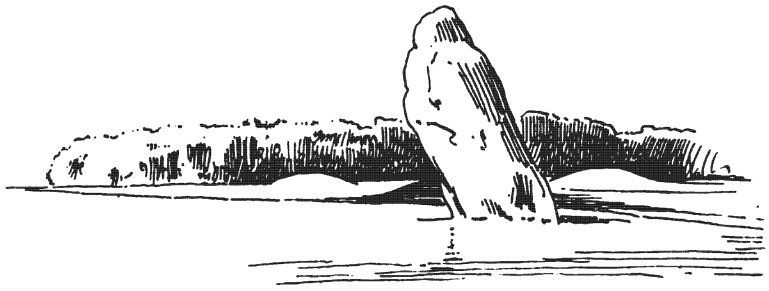
There was another reason for this choice of situation. The presence of the Cursus and avenues attached to the temple prove that the tumuli scattered over the Down, singly or in clusters, were already there when Stonehenge was erected. Although there is no perceptible order in their distribution, we find them, as a general rule, on the higher and more conspicuous parts of the Down. By choosing low-lying ground for the Fair-field, the latter escaped the tumuli, or nearly so; for at its western end, which is on the level Down, there are two small barrows within the enclosure, and these must have been on the ground before it was made.

If the land was free of tumuli when Stonehenge was erected, no object can be assigned for constructing the earthworks attached to it, and we are forced to adopt some purely fanciful meaning for the Cursus. A practical reason for connecting this earthwork with the temple having been found, a presumption is raised that it

should show the same characteristics of thoughtful plotting, combined with rude execution, which we observed in the temple; and we propose to show that this is the case, that the orientation and length of the enclosed Fair-field have been regulated by deliberate plotting.

## The Cursus is shown by its Plotting to be an Adjunct of the Temple.

Plan VI, showing the earthworks, is taken from the Ordnance; a few lines have been added to aid the eye.



A.—View from Tumulus 23, looking towards the North-western angle of the Cursus.

If we stand at the point marked 1 on the bank of the enclosure we can look along its northern boundary.

From the same starting-point a line passing through the tip of the Sun-stone strikes the slope of the tumulus (No. 23), which is so conspicuous an object a few hundred feet to the east of Stonehenge. Formerly this line could have been easily followed by the eye, but the line of sight is now interrupted by one of the many formal plantations which disfigure the Down. The line crosses a tumulus, which, however, does not interfere with the view—on the contrary, it helps to mark the line; for the mound is a small one, and is in a low-lying part of the Plain, so that its summit, seen from the slope of the Stonehenge tumulus, coincides with the level of the land about end of the Cursus.

This is shown by the two accompanying sketches : the first is taken from the slope of the Stonehenge tumulus (No. 23), facing the north-western angle of the Cursus ; the second, taken on the same line, is from the ring of the low-lying tumulus, looking back over the mound at the Sun-stone.

The Cursus is 9,000 ft. in length ; a line from a central point on its northern boundary, and at right angles to it, crosses tumulus (No. 23), and is intersected by the line from the north-western extremity of the Cursus, on the northern slope of the tumulus, at T.

Thus we have a right-angled triangle formed, the base the northern bank of the Cursus, 4,500 ft. ; the perpendicular, from

B.—View looking back from the ring of the Tumulus 35.

centre of northern boundary to Barrow, 3,000 ft. ; and the hypothenuse (passing through the tip of the Sun-stone), 5,408 ft.

Thus the base is to the hypothenuse as 5 is to 6 (within a small fraction). Also the distance from T, the point of intersection on the tumulus, to S the Sun-stone, is one-twelfth of the total distance of T from I.

It is difficult to believe that such combinations result from chance ; they indicate a close relationship between tomb, earthworks, and temple ; if the earthworks have been set out from the barrow, then the temple itself may have been so set out. What considerations may there be for upholding such an opinion ?

The placing of the Sun-stone in regard to the tumulus governs the placing of both temple and earthwork ; this leads to the inference that the tomb belonged to some family instrumental

in raising the temple, and it becomes a matter of special interest to learn what this barrow, when excavated, was found to contain.

Sir R. Colt Hoare records that "Mr. Cunnington explored it, and that at his first trial he was unsuccessful, but, on a second, he found a rude urn inverted over a pile of burnt bones, amongst which was an elegant pair of ivory tweezers."[1]

The ghost of an elegant pair of ivory tweezers cannot have been deemed likely to be of practical service to the disembodied ghost resident within the mound, or absent elsewhere, and it matters little to what errant fancy its presence here be ascribed; there is, however, no cause to believe it to have been manufactured in a remote, vaguely defined, prehistoric bronze epoch.

The mound is surrounded by a ring or ditch, and as it contained an interment by cremation, it probably is of later date than some others on the Plain; the simple bowl-shaped tumulus, accompanied by inhumation, being judged by experts to be an earlier form of burial. Even if the burial could be dated, this would not enable us to date the temple.

Sir R. Colt Hoare adds: "In opening the fine bell-shaped barrow N.E. of Stonehenge we also found one or two pieces of the chippings of these stones (Blue-stones), as well as in the waggon-tracks round the arc of the temple."[2]

We do not learn whereabouts in the mound these chippings were found; they may, as other such chippings were lying about, have been cast upon the mound on some occasion when it received a refacing.

## The Plotting of the Temple and its Earthworks.

The placing of the temple depends on the Sun-stone, for it is fitted to the shadow cast by that stone at a critical moment of the year. The question, therefore, arises, How have the relative

[1] Sir R. Colt Hoare, *Tumuli Wiltunenses: A Guide to the Barrows on the Plain of Stonehenge*, No. 23.

[2] Sir R. Colt Hoare, *Ancient Wilts*, 1, p. 127.

positions of Sun-stone and Barrow No. 23 been regulated, and in consequence the position of the temple in regard to the barrow?

We enquire, firstly, which of the two, the Sun-stone or the barrow, was first on the ground? If we obliterate in our mind's-eye the works of man upon these Downs, and enquire why Stonehenge should have been erected where we find it, we are at a loss for an answer.

North, south, east, and west, there are more commanding sites, offering a free horizon line, and equally or more conveniently placed in regard to the river. Surely the high ridge of land to the south is preferable; it offers a freer horizon, and is nearer the river to which an adjacent valley conducts. An answer is not far to seek; when it was proposed to construct the temple, this land was probably then, as now, thickly studded with memorials of the dead; and we have previously observed that the presence of the avenues can only be accounted for on the supposition that when they were constructed the barrows were already existent.

We therefore picture to ourselves the grave-mounds on the otherwise unoccupied Down, the Stonehenge Barrow (No. 23) being omitted, and again enquire why this site should have been chosen.

Why should not the temple have been placed on the high down beside the King's barrows, nearer to the "High-place", the "Ramparts", and to the river? Why place it further west and then construct a "Long Avenue" leading to it?

The answer is, that the Stonehenge barrow, like others, was already on the Down when it was proposed to raise the temple; the land sanctified by the presence of the grave-mounds attracted the temple, and a particular barrow (No. 23) fixed it at the precise spot where we find it.

We begin, therefore, with this barrow.

To the east the land slopes rapidly to a gentle valley in the Downs; the lay of the land therefore advised the founder to place it to the west of the tumulus.

When previously considering the proportions of Stonehenge we started with an initial measurement, the distance on the axis

from Sun-stone to point of the Slaughter-stone, of one hundred feet, from that we derived the important measurement of the diameter of the lintel ring, a hundred and one feet. Now this latter measure (within a small fraction, such as rude workmanship does not enable us to follow) equals 100 Greek feet—101.34 feet. A presumption is, therefore, raised that the temple was set out by a Greek measure. We appear to have been putting the cart before the horse: starting from the Sun-stone this result was inevitable; nor was it unreasonable to presume that the Sun-stone was fixed before the temple was raised.

We now propose to make the Barrow the starting-point of our investigations, and to show how the measure of 100 English feet occurs as a residue after measurements taken with a Greek standard.

If we have concluded rightly that Stonehenge offers evidence of foreign influence, derived probably from the Schools of Massilia, we should feel no surprise at finding the temple set out by means of a Greek measure, because Massilia was a Greek colony and a free town.

The theory is as follows (see Plan V):—A represents a pole fixed at the edge of the ring of the tumulus on its western side; B, a pole placed due south of A, and in line with southern limit of the ring.

The direction may have been given by observing the North Star.

A C is a line drawn due west of A. This may have been done by fixing a pole as far north of A as B is to south, the intersection of arcs with equal radii described from these points, north and south of A, would give the direction.

The winter sunrise or summer sunset gives direction to the line B S.

The summer sunrise or winter sunset gives direction to the line C S, or the AXIS.

The intersection of these two lines determines the position of the Sun-stone.

The midsummer sunrise would offer the better opportunity for orienting the temple so far as the angle at which the sun rises to the horizon is concerned; when, however, we consider the great difficulty in our climate of obtaining a clear midsummer sunrise observation on account of mist, a circumstance which might well have delayed construction for years, it seems more probable that the temple was set by the midwinter sunset; and that the moment selected was when the centre of the orb corresponded with the horizon line, this being the precise moment, according to the mathematicians, that divided day from night. Plutarch, Roman question 84, says: "The mathematicians who set down the confines and limits of day and night, at the very instant point when the sun seemeth to touch the circle of the horizon with his centre." The down is level in the necessary direction.

The meridian of A intersects the axis at D, the meridian of S (Sun-stone) intersects the line A C at E.

The centre of the temple ⊙ was probably determined by measuring 100 Greek feet from C on the line C A, this giving the point F; the same measure marked off on the axis from F gives G, the centre being half way between C and G; the distance from centre ⊙ to G, measured forward on the axis from G, fixes the point of the Slaughter-stone, or radius of Earth-circle, the remaining distance to Sun-stone = 100 feet.

The centre being thus determined, 50 Greek feet supplies a measure for the radius of the outer circle.

The intersection of the circumference with the base line A C gives the position of stone No. 11, which caused a break in the lintel ring, and probably marked the entrance to the temple (see Plan IV). The radius marked off westward from No. 11 on the circumference gives centres for piers No. 16 and 21, and in the opposite direction for piers No. 6 and 7. Thus the fact of the axis not passing midway between Sarsen piers is accounted for with absolute precision.

The line from centre ⊙ to F, if produced to double its length, gives the measure for the distance of stones and mounds of the

Earth-circle from the axis, whilst C F = diameter of Sarsen circle, and C to centre = diameter of Blue-stone circle. Also the critical point C, apparently determines the angle at which the southern trilithon is set to the Axis (see Plan I). Such abundant proof of orderly plotting cannot be passed by, and the writer fails to see how the facts can be accounted for by any theory simpler than the one proposed.

*The Plotting of the Cursus* (see Plans V and VI). B S, S D, and S T are equal, T being a point on the northern slope of the tumulus and east of A.

To fix the limits of the Cursus it was necessary to rope one long measurement only, viz., to prolong T D to H, nor would this operation entail any special difficulty.

H is a central point on the northern boundary of the Cursus, and within sight of the barrow.

The near side of the Cursus would not be visible from T owing to low lying ground. At H it would not be difficult by means of poles to mark a line at right angles to T H.

The western angle of the Cursus, I, would be fixed when an observer advancing westward on such a line should find himself in line also with S T. The eastern angle might be fixed by similar methods; the line I′ J′ drawn near the barrow = $\frac{1}{4}$ the length of the Cursus.

The western boundary being slightly beyond I, may be accounted for by S not being a pole to mark the direction, but a broad stone bending forwards.

The bulging of the southern boundary of the Cursus may be accounted for by the temple being just visible from the bank at this part, by retreating but a few steps it becomes lost to sight, the enclosure being on low-lying ground.

Stukeley described the Cursus when it remained as yet uninjured by the plough; but even in his day the eastern boundary was less well defined than the western: he says it appeared much trampled down, as if by horses. A concourse here assembled at times of festival would assuredly bring with them

many beasts—these required watering, and the nearest bend of the river lay east, in line with the northern boundary of the Cursus, the road passing by the Durrington stone.

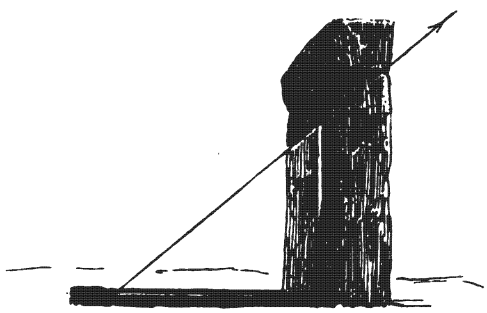
The Cursus is obviously irregular in shape; nevertheless, there remains a very strong probability that it is an adjunct of Stonehenge, and was designed with it, and is not an independent earthwork belonging to a different epoch, as Sir R. Colt Hoare and others have maintained, and as others have implied by not mentioning it.

The line T H as drawn on the plan = 3,000 feet, over uneven ground, as the crow flies.

If the work was set out with a Greek measure, T H is probably about 30 feet short, for we should expect this line to be five stadia in length.

We should also expect to find a Greek measure applied to the fixing of C, west of the barrow; nor are we disappointed, for B C = 600 Greek feet, or a stadium, within a few inches.

The Stonehenge design informs us that the direction of the sun's rays at its rising at the equinoxes and solstices was carefully noted; we may, therefore, feel reasonably confident that the altitude of the sun at midday at these critical times of the year was also observed; the more so when we learn that similar observations were made at an early date at Massilia.



Noon at the Equinoxes.

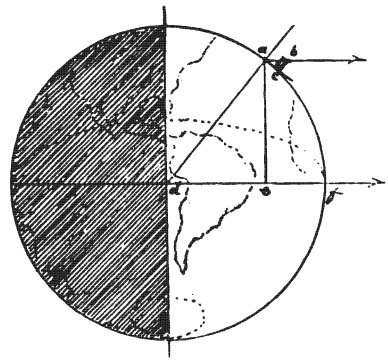
The line A C (see Plan V) gives the direction of a ray of light when the sun is rising or setting at the equinoxes. On this line we find the unique Stone, No. 11, placed south of the cleft of the southern trilithon; the trilithon may have been used as a gnomon.

The latitude of Stonehenge is 51° 11′.

The altitude of the sun at mid-day at the equinoxes would,

therefore, be 38° 49′, the difference between this angle and 90° being latitude.

The altitude of the sun at mid-day at the summer solstice = 62° 16′, the excess above equinoctial altitude, viz., 23° 27′ representing the inclination of the ecliptic. Consequently the altitude of the sun at mid-day at the winter solstice = 38° 49′—23° 27′ = 15° 22′.



Noon at the Vernal Equinox.

The ratio between radius and circumference being immutable, it follows that latitude is roughly to longitude, at Stonehenge, as 100 is to 62.7 (*Sine* 38° 49′).[1]

The lesser Cursus appears to be the abandoned fragment of an earthwork, which may have been schemed to be set out from A.

Has the placing of the Durrington stone been schemed? The exactness with which the distance of this stone from I = 2′ latitude, the halfway point being opposite the Cursus Avenue, and from H = 2′ longitude, the halfway point being in line with the Approach, is curious.

The diameter of the temple = 1″ latitude, and the depth of the ellipsis = 1″ longitude. This at first startling fact, is accounted for by the theory of plotting with aid of a Greek measure, thus: 1″ lat., or 101.38 feet, agrees within a very minute fraction with the standard in question, and 1″ long., or 63.97 feet, occurs, not because this is a geographical measure, but because 64 feet fits with other Stonehenge measurements thus: from Sun-stone

[1] According to a *brochure* on Pytheas by the Abbé Aoust of Marseilles, *Étude sur Pythéas*, Paris, 1866, that astronomer and navigator, about the middle of the fourth century before Christ, calculated the latitude of Massilia correctly to within a few seconds by measurement of shadows; a reference to this study is given in Elton's *Origins of English History*, p. 12.

to centre 256 feet = 4 × 64, and length of Altar table 16 feet = $\frac{64}{4}$; also from centre to trilithon 25 feet, is to 16 feet as 100 feet, on the Axis or distance from Sun-stone to Slaughter-stone, is to 64 feet on the meridian of the Sun-stone.

Thus the ellipsis is so designed that its measurements are dependent on the orientation of the temple.

NOTE OF DIMENSIONS OF TRIANGLES GIVEN IN FEET.

Amplitude, 39° 48′. Measurement presumed to have been used in setting out the temple = 100.34 feet = 100 Attic feet.

(Δ . C ⊙ F or F ⊙ G C F = 101.34. C ⊙ = 77.85. ⊙ F = 64.85.)
Centre to Point of Slaughter-stone, 2 × 77.85 = 155.7

(Δ . C A D . C D = 784.21. C A = 602.5. A D = 501.89.)

(Δ . C E S . C S = 333.55. C E = 256.2. S E = 213.4.)
C E . close approximation to measure Sun-stone to centre.

(Δ$^{s}$ of Cursus. T H I and T H J.)

(T to I or J = 12 × 450.66 = 5408. H to I or J = 12 × 375 = 4500. T H = 12 × 250 = 3000.)

(Δ . B A K . B K = 117.1. A K = 90. A B = 74.95.)

Δ . C A B . C B = 607.5. A C = 602.5. A B = 74.95. 6 × 101.25 = 607.5. 6 × 101.34 = 608.04.)

The earthworks are so unobtrusive in character that in dull weather an unobservant person might well pass them by without notice; this unobtrusiveness does not detract from the interest which attaches to them; nor can an adequate idea be formed of the temple if the earthworks belonging to it be ignored.

Stukeley believed the "Long Avenue" to be the path followed by religious processions on their way to the temple—a view reasonable enough; indeed, if we seek for any other explanation we are at a loss to find one. The functionaries who officiated at the temple probably did not live at Stonehenge, the forlorn situation forbids the supposition, and the temple may have been frequented only on occasions of "Fair-time".

Such persons may have resided on the "Mount of Ambres", now known as the Ramparts, or Vespasian's camp, the ancient high-place and holy-place of the Britons of these parts; this is the more likely because a confused tradition asserts that the founder of a monastery, which in later times stood there, was named Ambres or Ambrosius, in Welsh, Emrys, the Celtic Zeus.

A procession would thus naturally start from the high land north of the camp towards which we find the Long Avenue was directed; a procession, on crossing the brow of the Down on which are the "King's barrows", would come in sight of the strangers assembled on the "Fair-Field", who would advance along the Avenue prepared for them, and follow on in an orderly manner.

The Sun-stone placed to one side of the Avenue would indicate that the procession passed to the west of it—otherwise it would have encountered the Slaughter-stone lying askew in the passage; it probably swept round the latter.

Although the actual procedure in pagan sacrifices amongst Celts and Teutons is matter of surmise, the following passage from Jacob Grimm[1] may be of service:—"We have," he assures us, "scarcely any information except from Norse authorities. That the victim should be led round was considered essential. While the animal laid down its life on the sacrificial stone, all the streaming blood was caught either in a hollow dug for the purpose, or in vessels. With the gore they smeared the sacred vessels and utensils, and sprinkled the participants. Apparently divination was performed by means of the blood—perhaps a part of it was mixed with ale or mead, and drunk. Cauldrons are mentioned—we hear of a cauldron filled with ale, and not that the blood of a victim was mixed with it; it may have meant only a drink-offering. The cauldron served to cook, *i.e.*, to boil or seethe the victim's flesh; it was never roasted. The boilings, the cauldrons and pots of witches in later times may be connected with this. The distribution of the pieces among the people was probably undertaken by a priest; on great holidays the feast was held there and then in the assembly. That the priests and people really ate the food appears from a number of passages." The numerous finds of bull's-heads, hart's-heads, and charcoal, within the area of Stonehenge, show that these animals were there sacrificed. The hollow in the sacrificial stone in which the blood of the victim may have been caught has also been noted.

[1] *Teutonic Mythology.*

WORSHIP AT STONEHENGE.

If, in accordance with the explanation of the symbolism of the temple—if the trilithons, by their placing within the circle, relate to certain seasons enjoyed by the earth within the cycle of the year, the openings of these mystical gateways indicating feast-days celebrating the coming in of these seasons,—then we may presume these religious celebrations were in honour of deities who specially presided over these seasons. If so, the attributes of these deities should correspond with characteristics belonging to the several seasons.

To follow up this inquiry we turn to the pantheon of Gaul, and in the first place find J. Cæsar's mention of the five greater Gaulish gods, whom he equates with Roman gods. Fortunately we find also that French antiquaries have added further to our knowledge by the study of inscriptions found upon ruined altars. These belong to the Roman period, the period to which our inquiry relates.

Chapter V is devoted to this inquiry, and it is concluded that the attributes of the greater Celtic gods can only be accounted for by their springing either directly from characteristics of the seasons, or from human employments dependent on those seasons.

The five Celtic deities thus presiding equate with gods with planetary nomenclature, after whom the days of the week are named.

For further confirmation of the theory that the clefts by their placing show the dates of Celtic festivals, we turn to ancient customs, and find that a number of very interesting performances having their origin in pagan times, and common alike to the Teutonic and Celtic peoples, still are, or were, celebrated with much precision on the dates thus indicated. On the 1st of May we have well-known May-Day customs and May fires. We have midsummer fires and customs, harvest-homes, and thanksgivings, November fires, and spring fires, etc.

These ancient customs are treated of in Chapter VI ; in a rude,

artless fashion they honoured the gods by rites which commemorated certain seasons, in order that a propitious influence might be brought to bear upon the labours of the field. They were of the nature of charms which might, so men trusted, cause the Sun-god to regard them with favour, and to shed prosperity upon the land.

When the Romans were victorious, and the Britons found themselves powerless in their hands, and their priestly caste crushed, they may, thus overwhelmed with disaster, have believed that their offended gods had forsaken them for ever.

We learn from Tacitus the nature of the cruel injustices and oppressions imposed upon them by fraudulent governors; and to cap their despair we cannot but believe that traditions, barely a century old, of the barbarities perpetrated by Julius Cæsar upon their ancient allies, the "Veneti" of Brittany, were yet fresh in their memory. The account of that desperate struggle for liberty closes with these words—"Cæsar, therefore, having put to death the Senate, he sold the rest for slaves."

The project of building a new great temple under the leadership of their own chieftains (who had their own ends to serve in the matter), to be made partly of rocks selected from the same beds of boulders which had previously supplied material for their great temple of Avebury, partly of foreign rocks brought from lands beyond the sea, where brother Celts prospered under Roman sway, must have been well calculated to raise the drooping spirits of the people, and to inspire them with hope that this work might bring about a renewal of prosperity.

If the temple was erected by native princes, we can readily understand why this locality was selected, for the land was sanctified by having been from time immemorial the place of burial of British chieftains.

Thus we may well believe that Stonehenge was erected for a wise and politic purpose, to distract the minds of turbulent tribesmen from war, to promote peaceful intercourse and barter, to incite men with mutual interests to meet together to acknowledge the same gods, for the conjuring of fatal animosities,

even as men prayed the sun to conjure the demons of disease and blight.

The presence of barrows would enable marriages to be celebrated on the spot. A feast at the family tomb was an opportunity for a young woman about to marry to be formally introduced to the domestic worship of the family she was about to enter. That feasts did occur at Stonehenge barrows we have proof. We find also that Irish fairs, in honour of the Sun-god, were held in proximity to extensive burial-places.

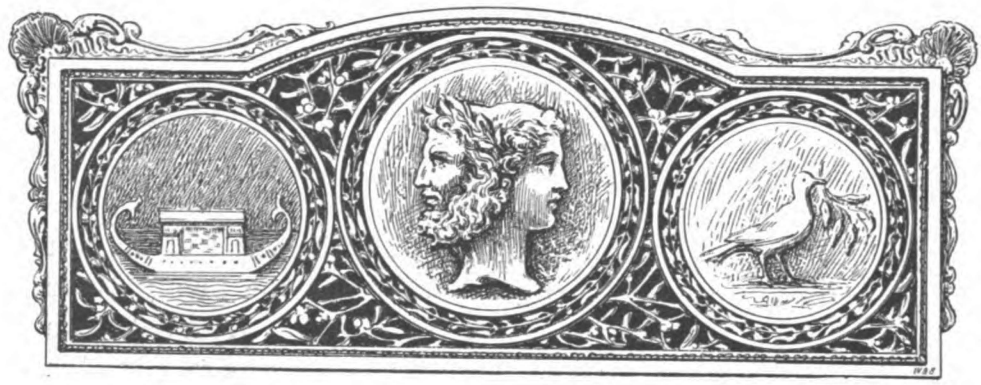
The arrangement of the avenues, the placing of the Cursus, the placing of the Sun-stone and Slaughter-stone, the break in the lintel-circle, etc., these characteristics point out to us the probable procedure at times of festival. The midsummer festival solemnised the holy espousals of the Sun-god with the land. Considering the presence of fiery rites at this season, when bonfires rivalled in number the lamps of the watchful heavenly host, and the bridegroom came not unawares, then surely sacred fire accompanied vigils at Stonehenge. It probably occupied a central position in front of the altar-table, where the rays of the rising sun fell on it, a position corresponding to the place of the fire in the primitive round hut.

The bond of union of the primitive household was domestic worship, the House-father making offerings to the House-spirit, fire being conceived as sacred,—the manifestation of a beneficent spirit which not only was the means by which food was rendered fit for the consumption of man, but was the medium also by which men entered into communion with the spirit-world: thus, before eating, a share of the food was cast on the fire for the House-spirits, thus invited to attend the meal.

In the temple men invoked the assistance of the sun, the visible "World-father", the son of the invisible "Spirit of Heaven". Men prayed the lord, the sun, the ruler and saviour of the world, to give them a good harvest, to give them their daily bread, and to deliver them from want.

From the position of the altar-table we perceive that any object

placed on it would, at the midsummer sunrise, have its shadow cast on the trilithon immediately behind it; also the shadow of the lintel-circle would cross the rock. It has been shown how this circle symbolically alludes to the fulness of August. As the sun rose, the shadow of this circle covered the altar-table. Thus, provided a clear midsummer sunrise, when the portal of the east the everlasting gates were thrown wide, and the Sun-god, the King in the fulness of his inconceivable glory, appeared, then he regarded the sacrifice in his honour with approbation, and at the same moment he wrote upon the wall with his sunbeams, his golden reed, an assurance of plenty for the comfort of his worshippers, for the earth is the Lord's and the fulness thereof.



CHAPTER IV.

# Stonehenge Theories and the Amesbury Story.

---

### Objections to the Theory that the Present Condition of Stonehenge offers Evidence of Incompletion.

THE theory rests, firstly, on the apparently accidental positions of the Slaughter-stone and Altar-stone, indicating that these stones were never fixed in their intended positions.

Secondly, on the smallness of stone No. 11 of the Sarsen circle, leading to the supposition that the builders ran short of fitting material, and consequently that this part was never completed.

Thirdly, on the irregularities of the Blue-stone circle, showing the original intention was to fill up this circle with stones equi-distant from each other.

LODGE TO AMESBURY PARK.

The reason why the Slaughter-stone and Altar-stone are placed as we find them has been considered when speaking of the purpose and symbolism of Stonehenge. Other considerations confirm the belief that they occupy their intended positions.

It is reasonable to presume that when these weighty rocks were brought to Stonehenge, those in charge of the operation were careful to bring each stone up to the place assigned for it, so as not to have to raise and shift it again. Also, as Professor Flinders Petrie has pointed out, both these stones lie very level; more so than others which have been accidentally cast on the ground.

It has been suggested that the Slaughter-stone was once erect, but no reason for its being so has been given; and if so placed, it would hide the Sun-stone from an observer standing on the axis.

Mr. H. Cunnington of Heytesbury, believing that this might be a fallen stone, dug a hole at the place where he believed it had once stood erect, and having satisfied himself by observation of the ground, that it had fallen, he wrote a letter to Mr. Britton pledging himself to prove it; there is, however, no evidence forthcoming to satisfy others. *Apropos*, Mr. W. Cunnington wrote to Mr. Long that if this stone stood erect, it must have entirely concealed the "gnomon" from persons standing in front of the Altar. "It would have been impossible to see the sun rise over the gnomon. It is nevertheless a fact that it does occupy this critical position as to the sunrise at the solstice." We have further proof that it never did so stand: the end nearer the temple is carefully worked, which shows it was not intended to bury it. This worked face shows no sign of tenons; the stone, therefore, was not intended for a pier. The other end has a row of holes sunk in it, which shape it to a point. The presence of these holes assures us that it was not intended to bury this end, for the more rock beneath the soil, the firmer the stone would stand. The holes, it may be urged, evidence an intention to cut a piece off the rock; and as this was not done, they are evidence of incompletion. This may be, but if the protruding part had been

broken off, and we had not the evidence of the line of holes, we should not be quite so sure as we now are, that this end was never buried in the ground. When considering the proportions of Stonehenge, evidence was given for the judicious placing of this stone.

In regard to the supposition that the smallness of stone 11 is due to the builders running short of suitable material, it may be remarked that on the Avebury Downs, from whence the Sarsen rocks have been transported, there are hundreds, probably thousands, of boulders lying scattered on the surface of the land.

Pier 10 is *in situ* (it swerves inwards), and pier 12, although prostrate, is fortunately yet on the ground. It is of full size, and the tenons, which once held the lintel it supported firmly in its place, are clearly discernible. The important part which the unique stone No. 11 plays in the design has been pointed out.

The present ruinous condition of Stonehenge is apparently due, firstly, to the accidents and wear and tear of time: thus the western trilithon fell January 3rd, 1797, on the occasion of a rapid thaw succeeding a very deep snow; secondly, to the ill-considered diggings of the Duke of Monmouth in 1620, which caused the fall of the central trilithon; and thirdly, to *spoliation.*

No less than twenty lintels are missing. These, the best squared stones, and less cumbrous than the piers, were the most tempting to the spoliator. Piers denuded of lintels still show their tenons. Five piers are missing, and portions only of others are on the ground. If the circle had been left incomplete, we should expect to see *one* vacant gap; we find, on the contrary, two gaps, and an extra stout pier (No. 16) dividing them, which has tenons worked on its upper face; therefore, after the missing lintels were taken down, the piers selected to be taken away were (probably from suitability of shape) selected from different points.

The only reason that can be offered for presuming the Sarsen circle was left incomplete, is that the work, for some unknown reason, was interrupted, or that the builders, though uninterrupted,

and at liberty to complete it, yet lacked the energy and spirit to do so.

The Blue-stones must have been fixed *after* the Sarsens; certainly after the raising of the Sarsen trilithons, otherwise the Blue-stone circle must have been uprooted to let the larger Sarsens pass.

The most arduous operation in connection with the erection of Stonehenge was the transportation of the Blue-stones; we should, therefore, be forced to believe that although the builders lacked the energy to complete a gap in the Sarsen circle, they nevertheless had the opportunity and energy to fetch and set up the Blue-stones. This is a contradiction; we therefore conclude that stones are missing because the building has suffered from spoliation. Fortunately, ancient records which make mention of Stonehenge inform us how this probably came to pass.

### Story of the Amesbury Massacre.

"*Geoffrey of Monmouth*, 1139.—Geoffrey, surnamed of Monmouth, is celebrated in English literature as the author, or at least the translator, of *Historia Britonum*, a work from which nearly all our great vernacular poets have drawn the materials for some of their noblest works of fiction and characters of romance. He lived in the early part of the twelfth century, and in the year 1152 was raised to the bishopric of St. Asaph."[1] Geoffrey gives a circumstantial account of a slaughter of British chiefs treacherously massacred at Amesbury, and asserts that a monument was erected to their memory, which, apparently, was none other than Stonehenge, and the circumstances attending its erection, which are given with much detail, are of an amazing character.

*Nennius*, an author of whom little is known, is presumed by some to have written as early as A.D. 796, others assign his work to A.D. 994. He likewise mentions a treacherous massacre of

[1] See Preface, Bohn's Translation.

British chieftains, without naming the place where it occurred: he says nothing about a Stone-circle.

*Gildas* "is supposed to have lived, and to have written what remains under his name, during some part of the sixth century."[1] From his history we obtain a view of the state of the country at the time when Stonehenge is reputed to have been constructed.

In the year A.D. 410, in the reign of the Emperor Honorius, Britain became an independent province. At first the people being united, succeeded in driving out the invading Picts and Scots. According to Gildas, "the boldness of the enemy was for a while checked, but not the wickedness of our countrymen; the enemy left our people, but the people did not leave their sins." In spite of the long dominion of the Romans, the rural population appear to have remained pagan under semi-independent chiefs; for, says Gildas (Sec. 8), "when this island, stiff and cold with frost and remote from the visible sun, received the beams of light, that is, the holy precepts of Christ, the true Sun, these rays were received with lukewarm minds by the inhabitants." He laments that the people "loved darkness instead of the Sun" (Sec. 22), that "kings were anointed not according to God's ordinance"; that the laity did all things contrary to their salvation; and that "the shepherds, who ought to have been an example to the people, slumbered away their time in drunkenness, as if they had been dipped in wine."

The nature of the wintry darkness in which "the stiff-necked and stubborn-minded people" were immersed, is shown by these words: "I will not call upon the mountains, fountains, or hills, or upon the rivers, which now are subservient to the use of men, but once were an abomination and destruction to them, and to which the blind people paid divine honour."

The country being again threatened with invasion from Picts and Scots, Gurthrigern (Vorltigern), that proud tyrant, sealed the country's doom by inviting "the fierce and impious Saxons" to

[1] See Preface, Bohn's Translation.

settle at Thanet. These at first aided the Britons in repelling the Picts, but later, being strengthened by new arrivals of their countrymen, they invaded Kent, and gained a victory at Aylesford, A.D. 455. Two years later they again made a sudden advance, and, defeating the Britons at the passage of the Cray, made themselves masters of West Kent.

It is in connection with this crisis that we have the story of the massacre and building of Stonehenge.

*Nennius* gives the following account of a stratagem which preceded the Saxon attack. "With insidious intention they sent messengers to the King, with offers of peace and perpetual friendship. Unsuspicious of treachery, the monarch, after advising with his elders, accepted the proposals. Hengist, under pretence of ratifying the treaty, prepared an entertainment, to which he invited the King, the nobles, and military officers, in number about three hundred. Speciously concealing his wicked intention, he ordered three hundred Saxons to conceal each a knife under his feet and to mix with the Britons, "and when," he said, "they are sufficiently inebriated, cry out, 'Nimed eure Saxes,' then let each draw his knife and kill his man; but spare the King on account of his marriage with my daughter, for it is better he should be ransomed than killed."

Thus three hundred British chieftains are said to have perished, and the captive King purchased his redemption by delivering up the three provinces of East, South, and Mid Sex, and other lands; hated for having received the Saxons, and being publicly charged by St. Germanus and the clergy in the sight of God, he betook himself to flight. St. Germanus visited this country A.D. 429, and returned on a second visit, in company with St. Lupus of Troyes, A.D. 447.

*Geoffrey of Monmouth* gives a similar account of the massacre; except that he states that the conference ordered by the British King took place on the Kalends of May, at the monastery of Ambrius (Amesbury), "To whose bodies St. Eldad afterwards gave Christian burial, not far from Kaercaradoc, *in a burying-place*

*near the Monastery of Ambius, the Abbot, who was the founder of it.*"[1]

The Saxons being driven back to Thanet by the arms of Aurelius,[2] we hear that his first care was to restore the churches which had suffered during the war. He undertook the rebuilding of the Cathedral Church at York, beside others in that province. From there he went to London, where "he beheld with sorrow the destruction made in it, and recalled the remainder of the citizens from all parts, and began the restoration of it." "From thence he went to Winchester, to repair the ruins of it, as he did to other cities; and when the work was finished there, he went, at the instance of Bishop Eldad, to the monastery where the princes whom the wicked Hengist had treacherously murdered lay buried. *At this place was a convent that maintained three hundred friars, situated on the mountain of Ambrius, who, as is reported, had been the founder of it.*"

"The sight of the place where the dead lay made the King, who was of a compassionate temper, shed tears, and at last enter upon thoughts what kind of monument to erect upon it."

The diffident carpenters and masons, who were summoned to consider the question of a suitable monument, refused to undertake its construction; and in this difficulty Merlin, the prophet, was recommended as the only capable person. The prophet suggests that the King "should send for the 'Giants' Dance,' which is in Killarous, a mountain in Ireland," "a structure composed of stones of a vast magnitude and wonderful quality, and if they can be placed here, as they are there, round this spot of ground, they will stand for ever."

The wisdom of this proposal not being immediately obvious, Aurelius irreverently "burst into laughter".

Merlin then assures him that "they are mystical stones, and of a medicinal virtue. The giants of old brought them from the farthest coast of Africa, and placed them in Ireland when they

[1] Geoffrey, *Hist* chap. xv.

[2] *Ibid.*, chap. ix.

VESPASIAN'S CAMP.

inhabited that country. Their design was to make baths in them, when they should be taken with illness. For their method was to wash the stones, and put their sick into the water, which infallibly cured them. With the like success they cured wounds also, adding only the application of herbs. There is not a stone there which has not some healing virtue."

When the Britons heard this they resolved to send for the stones, and to make war on the people of Ireland if their seizure should be opposed; to accomplish which they made choice of Uther Pendragon, to be attended with fifteen thousand men, and the prophet Merlin as adviser.

A fleet having been prepared, they set sail, and with a fair wind arrived in Ireland. Having overcome opposition on the part of the natives, "they went to the mountain Killarous and arrived at the structure of stone," which they took down and transported in triumph to the burial-place. Merlin appears to have flattered himself on his engineering skill; he jeers at the young men struggling to take down the stones. "*Now try your forces, young men, and see whether art or strength can do the most towards taking down the stones.*" Then having "*placed in order the engines that were necessary, he took down the stones with an incredible facility.*"

When Aurelius had notice of the arrival of the stones, "he sent messengers to all parts of Britain, to summon the clergy and people together to *the Mount of Ambrius*, in order to celebrate with joy and honour the erection of the monument." Upon this summons appeared the bishops, abbats, and people of all other orders and qualities; and upon the day and place appointed for their general meeting, "*Aurelius placed the crown upon his head, and, with royal pomp, celebrated the feast of Pentecost, the solemnity whereof he continued the three following days.*"

Having bestowed places of honour that were vacant, as rewards upon those for whose good services he was indebted, he ordered Merlin to set up the stones brought over from Ireland, "*about the sepulchre; which he accordingly did, and placed them in the same*

*manner as they had been in on the mountain of Killarous, and thereby gave a manifest proof of the prevalence of art above strength.*"

The death of Aurelius, which occurred shortly afterwards, is said to have been due to the treachery of pagan enemies. When lying sick at Winchester, Pascentius, son of Vortigern, is accused of having bribed a Saxon to disguise himself as a monk and gain admittance to the King's presence, on pretence of being a physician. The traitor succeeding in this ruse, the King died from a poisoned potion.

Upon his death, the bishops, abbats, and all the clergy of that province, met together at Winchester to solemnize his funeral, "*and because in his lifetime he had given orders for his being buried in the sepulchre which he had prepared, they therefore carried his corpse thither.*" He was therefore "*buried by the bishop of the country, near the Convent of Ambrius, within the Giants' Dance, which in his lifetime he had commanded to be made.*"

Uther, his brother, then took the crown, and waged war with success against the Saxons. He, too, was reputed to have died of poison, although, for some time previous to his demise, he was carried from place to place in a horse litter, and was named the half-dead King.

"As soon as the King's death was divulged, the bishops and clergy of the kingdom assembled, *and carried his body to the Convent of Ambrius, where they buried it with regal solemnity, close by Aurelius Ambrosius, within the Giants' Dance.*"

## How the confused Stories relating to the Amesbury Massacre and Erection of Stonehenge may be explained.

Bearing in mind the ruthless and implacable animosity shown by the Saxon invaders towards the natives; also that Briton and Saxon spoke different languages and were mutually unintelligible except through the medium of an interpreter; the banquet with the British King and three hundred unarmed nobles on one

side, and Hengist, with three hundred followers, with knives concealed in their leggings, on the other, carousing at the monastery of Amesbury, may be dismissed as an impossible invention. We can, however, give a reasonable conjecture how such a story arose.

We see the nature of the fatal dissensions at work amongst the Britons; it is aptly illustrated by the tradition that a British noble bribed one of "the fierce and impious Saxons" to treacherously poison the Christian King, Ambrosius.

Christian Briton and Pagan Briton viewed each other with deadly distrust; only when confronted with a danger which threatened instant destruction to all, would the people combine for mutual defence.

It was apparently whilst British chieftains were gathered together at Amesbury for the festivities, or fair time, of the Kalends of May, according to ancient custom, that the Saxons, who may have lulled suspicion with false assurances of peace, treacherously made their attack on West Kent. We hear of a massacre, the British King a fugitive, and Ambrosius chosen to command the force sent against the invader, whom ultimately he defeats and drives back to the island of Thanet. Thus it appears not improbable that the British chieftains who, as tradition asserts, fell at Amesbury, were the victims of a revolutionary outburst, which, led by the church party, seated Aurelius on the throne. Mr. Green, in speaking of the Saxon victory at the passage of the Cray, says: "It would seem that the Romanized Britons rose in revolt under Aurelius Ambrosianus, a descendant of the last Roman general, who claimed the purple as an emperor in Britain, and that the success of Aurelius drove his rival (Vortigern) to the mountains of the west."[1]

In connection with this event, we have the visit of the French prelates, and St. Germanus had already gained prestige in this country by taking an active part against invading Picts; his "Halleluia victories" seem to point him out as instrumental in

[1] J. R. Green, *Making of England*, 1882, pp. 37-38.

gaining that victory by which, so we are told, "art prevailed over force."

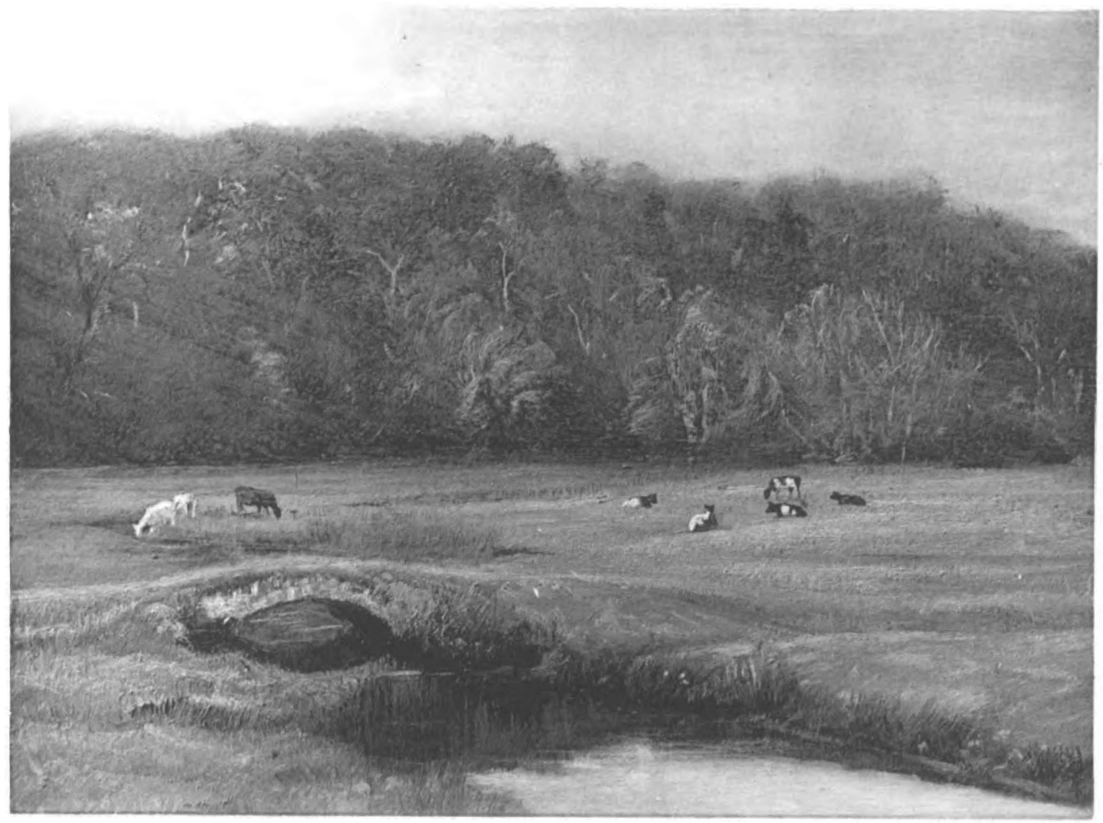
The chroniclers were members of the church, and the catastrophe which placed their party in sovereign power, is attributed by them *directly* instead of *indirectly* to "the perfidious and impious Saxon."

The knife was indeed hidden in the legging of the Saxon; the anxiety of the pious scribe to excuse the church when recounting the painful action forced upon his party by the Saxon advance, may have caused him to write ambiguously, and give a pious gloss to the story, which Geoffrey later embellished and made ridiculous.

At the close of the war, Aurelius exerts himself to rebuild or restore the churches which had suffered from the devastations of the enemy; in this frame of mind he repairs to the convent on Mount Ambrius.

His first thought is to build a monument, ostensibly to honour the memory of the princes who fell in the murderous affair which led to his own rise of fortune. It appears, however, that he also ordered a royal sepulchre to be made for himself; and we learn that at his demise at Winchester, his body was brought and buried within it, and, in like manner, the body of Uther, his brother, was carried to the convent of Ambrius and buried close by Aurelius.

At the point in the story when "the diffident masons" stand aside to make way for Merlin the prophet, we apparently have to do with another tradition, one relating to the erection of Stonehenge. Confusion may be accounted for by the repetition of such words as Emrys or Ambres, "the Mount of Ambrius", the town of Ambrius or Ambresbury = Amesbury. Prof. Rhys has pointed out that Geoffrey, in another episode of the Merlin myth, names the prophet "Merlin Ambrosius", or "Merlin Emrys", whom he regards as equivalent to the Zeus of Brythonic paganism; and Mr. Davies before him says, "it is clear that the sacred building (Stonehenge) did not receive its name, Gwaith Emrys, from Emrys,



THE RAMPARTS.

or Ambrosius, a prince who fought with Hengist, but that, on the other hand, it communicated to him its own name, as he was the president and defender of the Ambrosial stones", to which trust he appears to have been fatally false.[1]

In this way the introduction of Merlin is explained; although, so confused is the story, he is represented as superintending the pulling down of the temple which bore his name; clearly the Ambrosius who did this was the Christian King residing at the monastery on the Mount of Ambrius, a mile distant from Stonehenge, and anxious to improve the monastery, and frankly signalize the victory of the church. It must have been a grateful sight for the monks to see the ancient shrine shattered under the hypocritical plea of honouring the graves of their fallen enemies with a gift of their magical stones.

If we may venture to be guided by the present condition of Stonehenge, considered in conjunction with this ancient tradition of the taking down of a Sacred-stone Circle, what happened was as follows. Until the King insisted, there was diffidence shown about touching the Stones at all. It was at first proposed to remove the Blue-stones, these being the smaller and the more easy to transport.

The young men with difficulty uprooted about one half of them; and these for the most part probably remain recumbent on the ground in the positions they assumed when so overthrown, although a few are missing. These stones being firmly fixed and awkward in shape, it was found that, with a little mechanical management, the better-shaped lintels could be used, so "the engines being placed in order", and the masons having entirely recovered from their diffidence, they "took down the stones with an incredible facility."

No less than twenty lintels are missing, and two lie broken on the ground.

If the shattering of Stonehenge be thus rightly explained, truly

[1] J. Rhys, *The Hibbert Lectures*, 1886, pp. 151 and 194; and E. Davies, *Mythology and Rites of the British Druids*, p. 384.

it was a shabby business—a mean, cynical, mocking spirit, caused the ancient and dignified temple to be wrecked; the fallen chieftains received not as a memorial tribute their magical Blue-stones, they were given lintels instead.

Five Sarsen piers are missing; were these transported for the construction of the royal sepulchre?

If the stones have been carried away, where, it may be asked, may they now be?

In the year A.D. 552, Cynric, King of the Gewissas or West Saxons, advanced from Winchester by the Roman road, which led directly west to Old Sarum, or Sorbiodunum. Upon the fall of that stronghold the whole of Wiltshire lay at their mercy. This event sealed the fate of the British Monastery at Amesbury, "and not only the laity" but "the Lord's own flock, and its shepherds who slumbered away their time as if they had been dipped in wine", must have been swept from the face of the land by "the fierce and impious Saxons".

In A.D. 980, the ancient monastery was succeeded by a house of Benedictine nuns, which stood, not on the Mount of Ambrius, but on the level meads beneath it, and on the opposite bank of the Avon, close to Amesbury Church.

It was founded by Elfrida, Queen Dowager of King Edgar, in atonement for the murder of her son-in-law, Edward the Martyr, at Corfe Castle.[1]

This, too, has passed away, and left not a trace behind; a nobleman's country house arose beside the church. In the course of time this, too, tottered with age, was taken down, and the mansion of Sir Edmund Antrobus now occupies the site of the nunnery. When we consider these things, we are inclined rather to rejoice that one stone of Stonehenge be yet left upon another, than to feel surprise that those missing are no longer recoverable.

[1] Rev. J. C. Jackson, "Ancient Chapels of Wilts", reprinted from the *Wilts Archæological Magazine*, vol. x, 1866; see, also, Speed, *Hist.*, p. 356.

## Objections to the Sepulchral Theory.

Owing to burials having very generally been found in ruder stone circles in this country, it has been concluded that Stonehenge may have been a temple dedicated to a sepulchral cult, or to the worship of the *manes* of ancestors, and it has, therefore, been called a sepulchral circle. Another reason advanced for this opinion is that certain Indian hill-tribes, who at the present day erect stone-circles, are said to worship the spirits of their ancestors, and from time to time, when enduring unusual hardships, they add a stone to their sacred circles in honour of some ancestor.[1] The theory suggests that human remains may possibly lie concealed beneath the soil at Stonehenge. Excavations have, however, repeatedly been made, and up to the present time an interment of ashes in the western mound of the Earth-circle is the only authentic burial which has been discovered.

The sepulchral theory is also opposed to the fact that the Blue-stones have been transported hither from a great distance. If we accept the judgment of experts, such rocks are not to be found in this country. We are, therefore, forced to believe that when it was thought expedient to honour an ancestor with a stone, a distant and probably dangerous expedition, involving a sea voyage, was undertaken; also, that these expeditions were invariably directed to the same district in search for a particular quality of stone. The advocate for this theory concludes that Stonehenge was erected in the second or third century before the Christian era; when the sea voyages in search for Blue-stones commenced is left to the imagination. The theory ignores the presence of Sarsen and Hornstone rocks in barrow No. 16, also an account, published about five years earlier, of chippings of *all* the stones discovered in the concreted substance at the foot of the Blue-stones.[2]

[1] See article, J. Arthur Evans (*Archæological Review*, 1889), "Stonehenge".

[2] W. Cunnington, "Stonehenge Notes", *Wilts Arch. Mag.*, vol. xxi, December 1883.

It also does not explain Blue-stones being placed in pairs, without it be assumed that the Celts, when honouring their ancestors, honoured married couples. The theory also entirely fails to account for the characteristics of Stonehenge : for example, for the trilithons graduated in height ; nor for the presence of the Sun-stone and other outlying stones ; the Cursus is also ignored.

No doubt the Celts, like other Aryan nations, believed in the spirits of deceased persons as well as in the spirits of nature. *Domestic* as distinguished from *public* worship is concerned with this belief; and its connection with the institution of marriage may partly account for Stonehenge being erected in the midst of a vast burial ground.

Should hereafter fresh excavations be undertaken at Stonehenge, and human remains be discovered within the precincts, which is unlikely, this would not affect the problems raised by Stonehenge ; nor would it prove that the temple was dedicated to a sepulchral cult, any more than the tombs, say in Westminster Abbey, show that building to have been raised for the worship of ancestors.

## Objections to Theories of Prehistoric Antiquity.

That the stones have been worked with steel tools—bronze tools being incapable of cutting such hard rocks ; and although they might be cut with flints, it is improbable that this work was executed with such means. For opinion that Celtic chisels of copper, alloyed with tin, were incapable of producing the workmanship we see at Stonehenge, see article by John Rickman, F.R.S., "Antiquity of Avebury and Stonehenge," *Archæologia*, vol. xxviii.

That we have the testimony of an eye-witness, John Webb (1625), that an iron spike was dug up near one of the trilithons, from a depth of 3 ft., in company with the lid of a small stone vase.[1] That the rudeness of other sacred circles is in keeping with what

[1] *Stone Heng Restored*, p. 124.

ancient authors assert regarding the barbarous condition of the natives. If at an extremely early date they were capable of raising a temple like Stonehenge, how is it that there are no other similar examples of their skill?

The alignments prove that Stonehenge was raised when the majority of the barrows were already on the plain, because if the Down were free of tumuli when the temple was erected, no reason can be assigned for the construction of these alignments.

If Stonehenge belongs to the remote prehistoric period, and the tumuli gradually congregated around it, we should expect to find them arranged with some reference to the temple; there is, however, no perceptible order in their distribution. The barrows, therefore, are older than Stonehenge. There is, however, no reason to believe that the practice of burying the dead in mounds was discontinued before Roman times.

A high antiquity assumes that the design is independent of foreign influence, and is opposed to the theory advocated respecting the placing of both Sarsens and Blue-stones, and offers no explanation for the introduction of foreign stones.

## Objections to a Date Later than that Proposed.

Mr. Fergusson believed Stonehenge to be a sepulchral monument raised in honour of British princes massacred by the Saxons at Amesbury, according to Geoffrey of Monmouth's account.

Reasons why Stonehenge must be regarded as a temple, and not as a sepulchral monument, have been given. Another may be added. It is incredible that Stonehenge and the barrow containing Stonehenge chippings, constructed at the same date, were both designed for a similar purpose. At the date of the alleged Amesbury massacre, Christianity had been the professed religion of Britain for more than a century. The country was in a distracted and pitiful condition, divided by reckless factions, and overrun with invading barbarians, with dire ruin quickly impending.

These times were not favourable for undertaking such an enterprise as the erection of the temple of Stonehenge.

After four centuries of Roman rule, bronze weapons were no longer in use, and interment in barrows was out of fashion.

Professor Flinders Petrie has attempted to date Stonehenge by the orientation of the central trilithon and Sun-stone. His final result, by the theory of sunrise observations, is limited to 730 A.D., ±200 years, or perhaps as early as 400 A.D., considering climatic changes. This theory relates to the Sarsens only. On the next page he, however, observes that the Blue-stones were probably later than the Sarsens. The objections stated against a late date show either that the calculation, or the assumptions upon which it is grounded, should be reconsidered.

## Objections to the Belgic Theory.

It has been assumed that before the Roman Conquest the Celts occupying Wiltshire had already been subdued by the Belgæ, and that these latter erected Stonehenge.

The Belgæ were a branch of the Cymri, a race settled in Germany; they had gradually pushed the Celts, or Gauls, westward; some tribes had crossed the Channel and settled in Kent, within the memory of men, at the time of Julius Cæsar.

The Belgic theory is founded, firstly, upon two passages in Cæsar's *Commentaries*,[1] and, secondly, upon a theory propounded about certain ditches presumed to be Belgic frontier lines.

The first passage in Cæsar occurs thus: Ambassadors sent by the tribe of the Remi to Cæsar, who apprehended trouble from the Belgæ settled in Gaul, assure him that the Suessiones, a people of Gallia Belgica, own an extensive and fertile country. "Among them, even in our own time, Divitiacus, the most powerful man of all Gaul, had been King; *who had held the government of a great part of these regions, as well as of Britain.*"

[1] Julius Cæsar, *B. G.*, ii, 3 and 4.

Stukeley assumed from this passage that the whole of the south of Britain was at one time under the rule of Divitiacus, and even derived the name of the town of Devizes from him; a town founded in the reign of Henry I. Three adjoining manors then met at the point at which the castle was built, "ad Divisas."[1]

That the rule of the Druidical pontiff, Divitiacus, over the "Suessiones" should have been accompanied by some recognition of his authority by Belgic tribes who had passed over into Kent is not surprising. It is, however, extremely unlikely that he ever visited this country; had he done so, Cæsar, who was his friend, would naturally have turned to him for information; the ignorance, however, of Julius Cæsar in regard to Britain before the invasion is profound. According to Julius Cæsar's account, the Belgic tribes who had passed over into this country inhabited Kent and Sussex, the maritime portion in which iron in small quantities was found.[2] According to Ptolemy's map (1605, Brit. Mus.), the coast to the west of Southampton waters was occupied by the Durotriges (Dorset), and further west by the Dumnonii, the latter occupied the country from the river Parret to the Land's End. Ptolemy's work relates to a comparatively late date, viz., to the reign of Hadrian.

The theory that the Belgæ overspread Wiltshire, before even the time of Julius Cæsar, in successive waves of conquest directed from the south, and that on these occasions they constructed boundary ditches, was advocated by Dr. Stukeley, and afterwards supported by Mr. E. Guest.[3] The latter, however, admits that these ditches could not have formed lines of defence. He also admits that the only ground for the hypothesis that the Belgæ overspread the south of Britain in successive waves of conquest rests on Julius Cæsar's statement, *B. G.*, v, 12, where it is stated that the maritime portion of Britain is inhabited by the Belgæ. In the same chapter, however, we learn that the maritime portion

[1] Stukeley, *Stonehenge*, p. 4.

[2] Cæsar, *B. G.*, v, 12.

[3] Edwin Guest, "On the Belgic Ditches," *Archæological Journal*, vol. viii, p. 143.

of which he speaks is Sussex, which produced iron. "In the maritime iron ; but the quantity of it is small."

The passage *B. G.*, ii, 3 and 4, is passed over. *See* Edwin Guest, LL.D, D.C.L, F.R.S., *Origines Celticæ* (1883, p. 202). He adds, "If we attempt to trace the progress of Belgic conquest by the light of Welsh traditions, we shall be disappointed"; and he regards "the all but utter silence of the Triads," in regard to the Belgic advance, as "one of the most puzzling circumstances connected with these mysterious records." If this advance never occurred in the manner he surmised, this silence appears less extraordinary. Well defined boundaries are signs of peaceable possession of the land by friendly tribes, rather than high-water marks of invading floods of enemies. Not being defendable, they could only serve the purpose of preventing disputes arising from trespass, such as the intrusion of cattle, belonging to one tribe, upon the pasture of their neighbours.

I. The Belgic theory implies that Stonehenge is unconnected with the tumuli which surround it; these latter are Celtic, and differ from barrows known to be of Belgic origin. Some of the Stonehenge barrows, however, contain chippings of the stones of which the temple is composed.

II. The Belgæ on the Continent were not a stone-circle constructing race. Mr. Fergusson remarks: "The Belgians erected no such monuments in their own country. *Gallic Belgica being exactly that part of France in which no stone monuments are found, and it is unlikely that the Belgians should have done here what they did not do at home.*"[1]

III. Those engaged in constructing Stonehenge must at first have worked in the neighbourhood of the ruder temple of Avebury, if not actually in sight of it, for there they obtained the Sarsens. If Avebury was built by a race other than that which raised Stonehenge, can we believe that these people would have allowed groups of foreigners (who had vanquished their neigh-

[1] J. Fergusson, *Rude Stone Monuments*, p. 119.

bours) to disperse in the neighbourhood of their temple in order to collect material to erect another which should eclipse its glory? We are obliged to infer that the Belgæ, having taken Avebury, were seized with a spirit of emulation, and religious enthusiasm, such as had previously animated the people they had conquered, and thereupon commenced the erection of Stonehenge.

IV. The difficulties in respect to the Blue-stones are even greater, for they belong to a geological formation which occurs in countries which, according to the testimony of history, were unvisited by the Belgæ.

V. The erection of Stonehenge must have been undertaken when interruption was not anticipated from attacks of neighbours, and by a people capable of organizing labour upon a considerable scale. The period of confusion and raiding prior to the Conquest seems ill suited for such an enterprise.

### On the Centre as Determined by Prof. Petrie.

Prof. Flinders Petrie's ground-plan of Stonehenge shows a group of five centres.

Stonehenge being constructed of stones of various quality, it has been suggested that the Sarsens and Blue-stone portions have been raised at different times. The theory originated in a letter of Mr. Cunningham to Sir R. Colt Hoare. Five centres tend to confirm the theory that the different parts belong to different periods; which is, however, opposed to the evidence of the Sarsen, Horn-stone, and Blue-stone rocks found in the Barrow 16, and to that of the chippings found at the base of the Blue-stones.

It will be noted that if we accept the theory that a difference of centring for the Sarsens and Blue-stones proves these parts to have been erected at different epochs, we ought to conclude also that two expeditions were made at different epochs to obtain the Blue-stones, there being a difference of centring also between the inner and outer Blue-stones; also, that although the slight mounds of the Earth-circle spread into that circle, and are attachments of it,

that these have in reality no connection with it, but belong to a different period; also, that although the stones and mounds of the Earth-circle mark out a parallelogram which exactly contains the temple, that this circumstance is nevertheless accidental.

The present method of fixing a centre for the temple differs from that adopted by Prof. Flinders Petrie. It is not concerned with the symmetry of either the outer or the inner faces of the Sarsen piers, but agrees with the centring of those piers; and it is obvious that their centring had to be considered with great care, otherwise the lintel-circle would have been unsightly. This centre agrees with the stones and mounds, and with the Blue-stone circle. There are irregularities in the Blue-stone circle which no theory of centring will account for, and which yet appear to be intentional; for instance, the group of three stones of that part, 38, with Horn-stones 37 and 39. For former appearance of this group, see illustrations given from Inigo Jones.

Although the inner Blue-stones agree with the unusual division of the Blue-stone circle, they have apparently been set out from another centre; the method followed appears to be simply a matter of adjustment for the sake of symmetry; the Altar-stone, which the inner Blue-stones closely surround, being placed askew, they range themselves about it better by the method adopted than if set out from the common centre.

The Earth-circle, if carried across the avenue or approach, would agree with the pointed end of the Slaughter-stone. This is 156 ft. from the centre, the point on the Earth-circle furthest removed from the Sun-stone being 159 ft. from the centre (see Plan IV). The centre of the Earth-circle is, therefore, a little further removed from the Sun-stone than is the centre of the temple: it is, however, on *the axis*.

It has been suggested that this discrepancy shows the Earth-circle to have been on the Plain before the temple was erected. Presuming the Earth-circle to have been perfect when it was proposed to erect a temple in the middle of it, we then perceive that it was accurately divided into two equal parts by the axis, which

line was also made to point to the midsummer sunrise. This accomplished, all that remained to be done in order to find a centre for the temple, was to divide this diameter into two equal parts; but failure attended this extremely simple operation. Finally, when the temple was completed a considerable portion of the Earth-circle must have been destroyed in order to open out the avenue, although we must presume that the Earth-ring was regarded with peculiar veneration, otherwise the founders of Stonehenge would never have been at any special trouble to build in the middle of it. A more probable course of procedure is, that the direction of the axis was first obtained by observing the direction of a shadow cast by a pole, and that the Earth-circle was originally correctly struck from a common centre on the axis; and that inaccuracy arose when, the temple being completed, the workmen began to heap up the earth to form the confining ring. It is evident that it would be extremely difficult to make the crest of such a bank correspond, with any approach to mathematical exactness, to a line scratched on the surface of the Down which the first shovelful of earth would cover; it therefore appears unreasonable to expect such mathematical accuracy, nor does it occur; nevertheless, Prof. Flinders Petrie puts the distance of crest of bank and bottom of ditch apart at $225 \pm 4$ inches. He considers this shows the Earth-circle to have been constructed with the help of a unit of measure, which occurs also in the line of great barrows near the Cursus, and in the Parallel Banks, which are not marked in Hoare's map, and that this measure is in strikingly close agreement with a prehistoric mean unit, probably of Phœnician origin.—*Stonehenge*, p. 23.

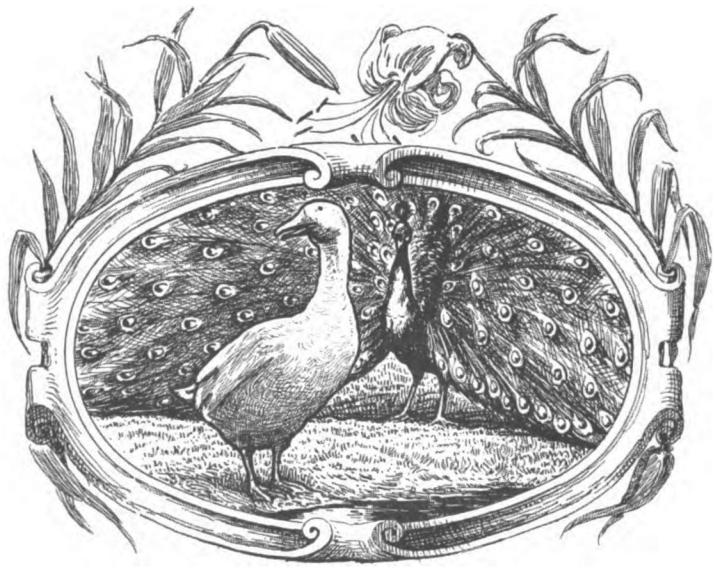
### Objections to the Astronomical Theories of Mr. Maurice, The Rev. E. Davies, Mr. Godfrey Higgins, and others.

"The most extraordinary peculiarity which Druidical circles possess is their agreement, in the number of stones of which they consist, with ancient astronomical cycles."

The initial difficulty is to make sure of the original number of stones. According to Mr. Godfrey Higgins, the outer circle of Stonehenge consisted of sixty stones, the base of the most famous of all the cycles of antiquity; the reader, however, has merely to examine views of the ruin given in this volume to assure himself that pier No. 11 could never have supported a lintel; this part, therefore, consisted of fifty-eight stones.

The next circle consists, says Mr. Godfrey Higgins, "of forty stones, but one stone on each side of the entrance is advanced out of line, so as to leave nineteen stones, a metonic cycle, on each side." As a matter of fact, one stone only of the choir-screen is advanced out of line, and that is the Horn-stone, 48; and it has been pointed out that we have proof that there never were many more stones in this part than we see to-day.

The Sarsen horseshoe has fifteen stones, which number does not agree with any known astronomical cycle; it is, however, needless to pursue the inquiry further.



WATERING SHEEP AT STONEHENGE.

CHAPTER V.

# Worship at Stonehenge.

JACOB GRIMM, speaking of pagan practices of the Teutonic peoples, says they were accustomed when taking an oath to swear by the sun, stretching out the right hand towards the all-seeing god. If the reader should lift his right hand, keeping his fingers outstretched and equally a little apart, he will perceive that they are graduated in height in the same manner as are the trilithons of Stonehenge; his second finger, the tallest, may then stand for the central trilithon, his first and third fingers of equal height, those next it east and west, then the little finger and thumb, again of equal height, for the two trilithons which point towards the Sun-stone.

If he should bring the tips of his fingers together, so as to form a circle, and kiss them, he will have saluted the sacred symbol of the circle; an act answering in ancient times to that of a Christian making the sign of the Cross.

Thus in remote antiquity were the heavenly orbs saluted, and reverence paid them as visible gods. When Job claims integrity in the worship of God, he says, "If I beheld the sun when it shined, or the moon walking in brightness, and my hand had been secretly enticed, or my mouth hath kissed my hand, this also were an iniquity to be punished by the judge, for I should have denied the God that is above." "Moving their right hand to their lips with the forefinger joining the elevated thumb, they paid her religious adoration, just as though she were the goddess Venus herself." This passage from the opening paragraph of the story of Cupid and Psyche by Apuleius, informs us that in the second century "kissing the hand" was an ordinary act of adoration. To touch a person with the finger-tips, then to raise them to the mouth and kiss them, is still an everyday salutation in the East.

## Celtic Gods mentioned by Julius Cæsar.

We propose to show that the attributes of the greater Gaulish gods correspond to characteristics of certain seasons.

Firstly, we shall consider these divinities in an order which corresponds to the natural order of the seasons, over which we believe these divinities presided; and, secondly, we shall consider the order of importance given them by Julius Cæsar.

The mention of the Gaulish gods is as follows:—"They (the Gauls) worship as their divinity Mercury in particular, and have many images of him, and regard him as the inventor of all arts; they consider him the guide of their journeys and marches, and believe him to have great influence over the acquisition of gain and mercantile transactions. Next to him they worship Apollo, and Mars, and Jupiter, and Minerva. Respecting these deities they have for the most part the same belief as other nations; that Apollo averts diseases, that Minerva imparts the invention of manufactures, that Mars presides over war. To him, when they have determined to engage in battle, they commonly vow those

things which they shall take in war. When they have conquered, they sacrifice whatever captured animals may have survived the conflict, and collect the other things into one place. In many States you may see piles of these things heaped up in their consecrated spots; nor does it often happen that anyone, disregarding the sanctity of the case, dares either to secrete in his house things captured, or take away those deposited; and the most severe punishment with torture has been established for such a deed."

"All the Gauls assert that they are descended from the god Dis, and that this tradition has been handed down by the Druids."[1]

In conjunction with this record we have to assist us the researches of French archæologists, who have studied inscriptions found upon altars; these are posterior to the Roman Conquest.

### The presumed god of the May Festival.

We commence with *Mercury*, the first on Cæsar's list, and shall keep count and order on the fingers of the upraised right hand, beginning with the—

(Third finger.) As the Celtic gods equate on the one hand with the Latin, so do they on the other with the Teutonic. For the attributes of the Celtic divinities the leading of Professor Rhys is here followed, for those Teutonic corresponding, that of Jacob Grimm.

Mercury, in a French inscription, is named Mercurius Artaius. "One can hardly be wrong", says Professor Rhys, "in associating with Artio's name such a Celtic word as Welsh Ar, 'ploughland.'" "This would serve to show that Mercury was associated by the Gauls with agriculture, especially ploughing."

In another inscription he is named "King or ruler of Mag-

[1] Julius Cæsar, *Gallic War*, Bk. VI, chap. xvii. Bohn.

niacon, in allusion to some place with which the god's name was associated."

The Gaulish name was Ogmios. He is the god of eloquence, and is also the Celtic Hercules, the Celts being of opinion that he conquered not so much by brute force "as by compulsion effected by persuasion." In Irish story, "Ogma, he is the champion of the Tuatha Dé Danam, the Tribes of the goddess, as the gods of the Goidelic pantheon are collectively called." He is also named "Ogma of the Shining Countenance"; and is the inventor of the Ogam alphabet.[1] This primitive arrangement consists of a long straight line, with a series of short lines joining it on either side; these being arranged in groups, and inclined at varying angles to the main stem. The system has been compared "to a tree with its stem bearing leaves and producing fruits, leaves growing out of the stem."[2]

These characteristics are appropriate to a deity ruling over the season of April-May; the occasion of the re-invigoration of nature when Earth appears to be conquered by the kindly persuasive force of the Sun. In a wild and sparsely-inhabited country, without good roads or accommodation, it is unlikely that people travelled during the winter months except under dire compulsion; and the season when the trees clothe themselves with leaves may well have signalized the recommencement of travel, of barter, of general intercourse, and knowledge. We see why the god of the season should be a creative god; it is then that nature bursts forth with new life and beauty, when the trees unfold their leaves, when the arable is green with the springing corn, and the meads are gay with wild flowers; when, after wintry storms, propitious breezes allow the shining sea to be traversed with greater safety; also, why this god should be the guide of journeys and marches, and the patron of mercantile transactions; for it is

[1] J. Rhys, *Hibbert Lectures*, 1886, pp. 6, 13, 16, 18, 21.

[2] For secret language named Ogam, see article by Thurneyson, *Revue Celtique*, vol. vii. See also Godfrey Higgins, *Celtic Druids*, pp. 19, 21, 35, 39, 249, 265, and 311.

AMESBURY BRIDGE.

now, after the long seclusion caused by winter, that men again begin to travel, and attend the May-fairs and festivals.

In Teutonic mythology, Mercury is equated with Wodan, Wotan, Wustan. He gives his name to Wednesday. "He is connected", says Jacob Grimm, "with the weather and wind; he is the wild hunter who stills the stormy sea. We can put him on a par with Zeus and Indra. His name is connected with the word 'wish', he is the moulding, creating, figuring, imagining god." "He resembles both Poseidon and Zeus, who rise out of the sea as bulls. He is the pervading, creative, and formative power, who bestows shape and beauty on men and all things, from whom proceeds the gift of song, and the management of war and victory; on whom, at the same time, depends the fertility of the soil, nay, wishing and all highest gifts and blessings. We need not be surprised to find him confounded with Zia, Tyr, the special god of war, or Mercurius, coupled with Mars."[1]

The confusion alluded to in the concluding sentence is easily explained when we regard the gods as presiding over the seasons, and as deities to be invoked in times of war as well as of peace. The gods of the winter season are not bellicose, because men did not wage war during winter. We shall find the Celtic Mars corresponds with a season of harvest; to him was dedicated the harvest of war as well as of peace. As the harvest is related to sowing and growth, so are the fruits of war to the inspiration or design which begins and conducts it.

In regard to the god being like a bull (we are reminded of the Zodiacal sign of the Bull), upon him, the god of genial Spring, depends the fertility of the soil; he is the god of the ploughed land. The land to be productive for man must be ploughed, and this is done by the bull. In the month of May his labours are finished; it is his holiday time, and he is driven to the flowering pastures along with the cows.

[1] See Jacob Grimm (trans. Stallybrass), chap. vii.

### The presumed god of the June Festival.

(Second finger.) We select the deity who on Cæsar's list is the fourth, viz., Jupiter. A Gaulish divinity, represented with a wheel in his hand, an emblem of the sun, has been identified with Jupiter by M. Gaidoz, the French antiquary.

The Welsh word for thunder, "taran", enables us, says Prof. Rhys, to identify several god-names in ancient inscriptions. "Taranus, a name borne by a divinity identified with thunder, in Gaulish, Taranucos, the son of Taranus or Thunder." He is identified as "the Celtic Hammer God, whose name meant lord, ruler, or god, and like the Roman god, Silvanus, he presided over woodlands, clearings, and gardens, together with the shepherd's interests." Irish mythology "represents the corn-field as the chosen battle-ground, where the powers favourable to man make war on those other powers that would blight his crops and blast the fruits of his labours." The Irish name for Thursday was dia Tordain; Welsh, Taran = thunder; Gaelic, torrum, tairneach, or tairmeanach = thunder. The same Tarano is, in the Vedas, a surname of Indra, the thunder-god, he that passes through, from taran = trans.[1]

The appropriateness of the assignment of midsummer, the season of thunderstorms, to the Celtic Jupiter (the wielder of the thunderbolt) is sufficiently obvious. The god is represented holding the wheel of the sun; it is in June that the sun rides in highest majesty above the earth, and thus a sovereign position amongst the gods is assigned to Jupiter. Plutarch observes: "Now the Sun is he who causeth the yeere, and the Moone maketh the moneth. Neither are we to thinke, that these be only and simply the figures and images of them (the gods): but beleeve we must,

[1] J. Rhys, *Hibbert Lectures*, 1886, pp. 55, 57, 60, 65, 73. See also J. Grimm, trans. Stallybrass), chap. vii, p. 168.

that the materiall Sun which we behold, is Jupiter, and this materiall Moone, Juno."[1]

In Teutonic mythology, Jupiter = Donar Thunar; Norse, Thorr. He gives his name to Thursday, "the god who rules the clouds and rain, who makes himself known in the lightning's flash and the rolling thunder, whose bolt cleaves the sky, and alights on the earth with deadly aim." Thunder = Thorr's driving. "The thundering god is conceived as emphatically a fatherly one, as Jupiter and Diespiter mountains were sacred to him." "Thunder and lightning are attributed to Thor in connection with dominion over weather and fruits"; "the worship of Thor coincides with that of Wustan, to whom, likewise, the reapers paid homage, as, on the other hand, Thor as well as Odinn guides the events of war, and receives his share of the spoils." "To Wustan's mightiest son, Thor, whose mother is Earth herself, and who is also named Perkunos, we must, if only for his lineage sake, allow a direct relation to agriculture. He clears up the atmosphere, he sends fertilizing showers, and his sacred tree supplies the nutritious acorn. Thor's minni was drunk to the prosperity of corn-fields." Thor's hammer is the thunder-bolt. "Hamar means, in the first place, a hard stone or rock, and, secondly, the tool fashioned out of it."[2]

### The presumed god of the August Festival.

(First finger.) We select the third on Cæsar's list, viz., Mars. "An inscription equates him with a Gaulish god named Caturix, the king or lord of battle"; another Gaulish inscription names him Segomo, and this name, says Prof. Rhys, "is found also in Ireland". The word is presumed to mean "the strong one, the upholder, the god who presides over the stronghold." Another inscription gives the god the name of Camulos. The name means a vaulted roof.[3]

[1] Plutarch, (trans. Philemon Holland); Roman Question, 77.
[2] J. Grimm (trans. Stallybrass), pp. 169, 176, and 180.
[3] J. Rhys, *Hibbert Lectures*, 1886, pp. 32, 39.

To this god, the god of victory, the Gauls dedicated the harvest of war, the spoils being piled up in the strongholds consecrated to him; and it is at this season that the harvest of the fields is reaped and triumphantly garnered in the bins, or stored in the vaulted granary, and we can well understand why the god to whom this season was specially consecrated was designated "the strong one", and "the upholder".

In Teutonic mythology, Mars is equated with Zio, Tiu; Norse, Tyr. He gives name to Tuesday. "We are entitled", says Grimm, "to claim a sphere for the Teutonic god, Zio, Tiu, Tyr, which places him on a level with the loftiest deities of antiquity."

"Represented in the Edda as Odin's son. He may seem inferior to him in power and moment, but the two really fall into one, inasmuch as both are directors of war and battle, and the fame of victory proceeds from each of them alike." "Tyr has a perfect right to a name identical with Zeus." "Mars is singled out as a chief god of all the Germanic nations, and mentioned side by side with Mercury."[1]

### The presumed god of the November Festival.

(The thumb.) We presume to be Dis, or Pluto, "from whom," Julius Cæsar tells us, "all the Gauls assert that they are descended." The son of Saturn and Ops, the latter a daughter of Cœlus and Terra, had numerous appellations, Cybele, Bona Dea, Magna Mater, Tellus, Proserpina, etc. French archæologists have identified Dis with "a Gaulish god named Cernunnos." An early Gallo-Roman altar has been exhumed in Paris. "Underneath the word Cerunnos is to be seen, bearded and clothed, a central figure, whose forehead is adorned with the two horns of a stag, from each of which hangs a torque." "The god is seated cross-legged on the ground, like Buddha."

[1] J. Grimm, pp. 193, 196.

AMESBURY CHURCH.

Another representation of the horned and squatting god shows him "between Apollo and Mercury, who have to stand. In the bend of his left arm, which rests on his knee, Cernunnos holds a bag, from which he pours forth a profusion of acorns or beech mast, which he helps out with his right hand in an attitude of attention, while a rat has been carved above the god's head on the tympanum of the pediment; a detail thought to be of significance, seeing that it is an animal that lives underground." Yet a third bas-relief shows similar characteristics; the god holds a torque, and a purse or bag, presumed to be symbols of wealth, "the god, like Pluto, was supposed to be lord of the metallic wealth of the world."[1]

We presume that the stag-horns which surmount the head of the heavy-mantled god, as well as his fixed and low position, are emblematic of the season. During the summer months of May and June, the bulls roam on the pastures with the cows, and the deer lie hidden in the verdure of the forest. In the winter time the bulls are secured in stalls, whilst the stags become more visible, and plough up the acorns and beech mast—this is the season of plenty. The rutting season is at the end of October, then the white mists of autumn mysteriously rise from the earth; and then, too, in the solemn stillness and silence caused by the heavy and motionless air, the impressive roar of the bellowing stags in the depths of the forest, must, in ancient times, have been a familiar sound.

### The presumed god of the March Festival.

(Fourth finger.) Apollo, who, according to Julius Cæsar, was the deity honoured next to Mercury, and who was supposed to have a special power to drive away diseases. An inscription has been discovered which shows he may have been named "the man-healing" or "man-protecting god". He is identified with several

[1] For Dis., see J. Rhys, *Hibbert Lectures*, 1886, pp. 78, 80 *et seq.*, and J. Grimm, p. 233.

names, viz., Maponos, Grannos, and Toutiorix. Old Welsh mapon, now mabon, means boy or male child: "Thus," says Prof. Rhys, "it seems certain that some of the Celts worshipped an Apollo, whom they described as an infant", and this is borne out by a group of inscriptions. Grannos means "to glow, burn, shine, gleam, heat, sunshine". He is called "the good light-bringing boy". "As a repeller of disease, it is quite in keeping with this that the god is found to have been not infrequently associated with places celebrated for their mineral or warm springs. He is represented holding a lyre and plectrum, and is associated with a female divinity named Sirona." She is represented as old, and is thought to represent the mother of the god. "In her left hand she has a bunch of fruit, and in her right some ears of corn, which she is holding up."[1]

These attributes are appropriate to a god of early spring, whose festival signalized the end of winter, or the first signs of the resurrection of vegetable life, which lay buried in the earth. Even as dawn drives away night, so does the infant god of spring drive away the ills of winter, and he is dear to man as music and infant smiles. He guards the seed-field, now sown with the past year's corn, which, moistened with warm showers, he causes to germinate. As at dawn birds break forth in song, so at this musical season do the birds pair and begin to sing.

When we turn to Teutonic mythology the corresponding god is Fro; Norse, Freyr, the joyful god. He has a divine sister associated with him, Frowa; Norse, Freyja. They are alike in their attributes, and can each stand for the other. He does not appear in the series of gods of the week, because Venus day, or Friday, is named after his sister, Freyja = Venus. She resembles not only Venus, but Isis, who seeks Osiris. "Freyr, and his sister Freyja, are suggestive of "Liber and Libera", "Dionysos and Proserpina."[2]

Such are the attributes of the Gaulish divinities mentioned

[1] For Gaulish Apollo, see J. Rhys, *Hibbert Lectures*, 1886, pp. 21, 24, 27 *et seq.*

[2] J. Grimm, pp. 209, 304, 306.

by Julius Cæsar. Neither Prof. Rhys nor Jacob Grimm, whom we have followed, associates these gods with seasons; nevertheless, by the characteristics which they assign to them, they are shown to be so associated, for if this be not true, these deities could be transposed in their order without detriment to the significance of their attributes. If this be done, however, their attributes are no longer in harmony with the sequence of natural phenomena, and we have to seek some other originating cause for these being assigned to them. As each deity has several characteristics, or a group of attributes which attach him to a special season, the chances against five deities each having such a group of attributes, and, at the same time, having nothing to do with the seasons, is so great, that we may consider this goes far to prove that the Celtic gods mentioned by Cæsar *had these* seasons specially consecrated to them. With these gods, goddesses were associated—divine mothers, similar to those of Teutonic mythology. "They are represented as young women of a benevolent countenance, and clad in long robes", "mostly in a sitting posture, with fruit in their laps, or occasionally an infant on their knees." These goddesses visited the homes of men, and, like the divine Teutonic mothers, "they taught mankind the homely arts, housekeeping, spinning, and weaving, around the hearth; and husbandry, sowing, and reaping; and these labours brought with them peace and quiet in the land."[1]

Of interest in connection with this subject is the Menhir Autel at Kernuz, Pont l'Abbé, near Quimper, Brittany, on which an article, by Admiral F. S. Tremlett, was published in the *Illustrated Archæologist*, June 1894. The Menhir, a truncated cone, is 10 ft. long; around the base are sculptured panels representing four of the Latin gods, in the order we have considered. The first represents Mercury with winged cap; in his left hand he carries the caduceus, and in his right a purse; by his side is a child. The second, which is the most perfect, is said to represent Hercules or Jupiter. The third sculpture is supposed to be Mars, who carries

[1] For Matrons, see J. Rhys, *Hibbert Lectures*, 1886, p. 100, and J. Grimm, p. 290.

a spear and shield. Beside his head there droops a curved orna-

The Menhir Autel, Brittany.

ment, "supposed to be a horn, with which the Gaulish Mars or Esus is usually represented as being adorned." The fourth repre-

sents a man and a woman, but is much defaced. Some antiquaries have thought they may represent Venus and Adonis, others maintain them to be Minerva and Apollo. All the male figures are nude, the female is fully draped.

In conclusion, we will review the five gods in the order in which they are mentioned by Julius Cæsar.

1st, Mercury—to whom we have presumed was consecrated the season of April-May, whose festival fell on the Calends of Summer.

2nd, Apollo—god of the early spring, February-March. He is represented as a musical, light-giving boy, accompanied by his mother. In Teutonic mythology he is the joyful god who accompanies the goddess Freyja, who gives her name to the day of the week, Friday, and who is equated with Venus.

3rd, Mars—to whom was consecrated the season of harvest, August-September.

4th, Jupiter—who guards the corn-field at midsummer, June-July, his festival being at the Summer Solstice.

5th, Dis, or Pluto, son of Saturn—October-November, whose festival coincides with the Calends of Winter.

If for Apollo we place Venus, and for Pluto, Saturn, we have Mercury, Venus, Mars, Jupiter, Saturn, as the relative order in which these divinities were honoured. This is the planetary order, which determines the succession of the days of the week; that is to say, the order which agrees with the times of revolution of the planets so named.

This helps to confirm the opinion that the greater Celtic gods, who shed their influence upon the earth, are none other than the "celestial wanderers", the planets. Their ancient symbols are as follows :—

☿ Mercury.—Full disc and lunar crescent, combined with the cross, the emblem of the sun.

♀ Venus.—Full disc, with the solar emblem below.

♂ Mars.—Full disc, with the solar emblem above, but slightly inclined, more usually thus ♂, when the symbol is supposed to represent the dart and shield of the god.

♃ Jupiter.—Also represented as a lunar crescent, in conjunction with solar emblem below.

♄ Saturn.—Also the same as the last, the emblems reversed in position.

The all-seeing sun, advancing with majestic regularity in his annual course, is manifestly the source of the world's abundance; yet this very regularity seems in contradiction to the uncertainty of the seasons, for spring differs from spring, and summer from summer, sufficiently to ensure either prosperity or privation to the cultivators of the soil. It is, therefore, not surprising that divine powers were ascribed to the planets, which, by their apparently wayward evolutions, were looked to as the gods who were responsible for these fluctuations, the special protectors of the seed-field and the corn-field against the attacks of the malevolent demons who, in the absence of the sun, seek by the spread of weeds and of disease and blight, to frustrate the labours of man.

STONEHENGE AND BARROW, AND PARALLEL BANKS.

CHAPTER VI.

# On Ancient Customs observed at certain Seasons.

THE widespread custom of unknown antiquity, of lighting bonfires at certain seasons, is shown by the heathenish rites which accompany these celebrations to be associated with extinct pagan religions. The church was unable to eradicate these observances, and they survived, and to some extent still survive, in Spring fires and attendant practices, May games, Midsummer fires, and November fires. We hear of sacred fires, not only amongst Teutonic and Celtic people, but in the East, also amongst Arabs, Persians, and Indians; and there are traces of similar customs amongst the ancient Greeks and Romans.

"Flame which had been kept some time among men," says Mr. Jacob Grimm, "was thought unserviceable for sacred uses; as holy water had to be drawn fresh from the spring, so it made all the difference; instead of the profaned, and, as it were, worn-

out flame, a new one was used." This was called "Wild-fire", and we hear of its being produced by different methods; by a wheel being turned sunways over spindles set in the axle; by the turning round of a pole by means of a lever; and by the violent rubbing of two great planks of wood, one against the other.[1]

### Mayfires and attendant Customs.

These fires were named Belteine, or Beltane. "Beltein signifies the fire of Bael, or the fire of 'the Lord'. La na Beal tinæ, and Neen na Beal tinæ, in the Irish language, are the day and eve of Beal's fire". Tine Beil = May-day, "so-called from large fires which the Druids used to light on the summits of the highest hills". The month of May to this day is called Mi na Beal tine—the month of Beal's fire. The Irish Beal appears in the Welsh dialect as Beli; the Latinized name is Beleunus or Belinus, a deity of light.[2]

Accounts of these fires are very numerous; the following is given by Mr. Tolands:—[3]

"On May-eve the Druids made prodigious fires on those carns, which, being every one in sight of some other, could not but afford a glorious show over a whole nation. These fires were in honour of Beal or Bealan, Latinized by the Roman authors into Belenus, by which name the Gauls and their colonies understood the sun, and, therefore, to this hour, the first day of May is, by the aboriginal Irish, called La Bealteine, or the day of Balen's fire. I remember one of those carns on Fawn Hill, within some miles of Londonderry, known by no other name but that of Bealtine, facing another such carn on the top of Inch Hill. May-day is likewise called La Bealteine by the Highlanders of Scotland. . . . So it is in the Isle of Man; and in Armoric a priest is still called Belec, or the servant

[1] J. Grimm, *Teutonic Mythology*, pp. 603, 608, 610.

[2] *English Cyclopædia*, Charles Knight; also J. Grimm, *Teutonic Mythology*, p. 612.

[3] Tolands, *Hist. of the Druids*, 1814, p. 114.

of Bel, and the priesthood Belegieth. Two such fires, as we have mentioned, were kindled by one another on May-eve in every village in the nation (as well as thro'out all Gaul, as in Britain, Ireland, and the adjoining lesser islands), between which fires the men and the beasts to be sacrificed were to pass, from whence came the proverb, between Bel's two fires, meaning one in a great strait, not knowing how to extricate himself. One of the fires was on the carn, another on the ground. On the eve of the first day of November, Samhbhuin, there were also such fires kindled, accompanied with sacrifice and fasting." On that evening all fires were extinguished. . . . "Then every master of a family was religiously obliged to take a portion of the consecrated fire home, and to kindle the fire anew in his house, which, for the ensuing year, was to be lucky and prosperous." . . . "The Celtic nations kindled other fires on Midsummer-eve, which are still continued by the Roman Catholics of Ireland; making them in all their grounds, and carrying brands about their cornfields. . . . Thus I have seen the people running and leaping through the St. John's fires of Ireland, and not only proud of passing unsinged, but as if it were some kind of lustration, thinking themselves in a special manner blest by this ceremony."

In the Isle of Man old customs have been maintained with extraordinary persistence; Mr. Joseph Train, in his account of the country, says, that when the May fires were lighted on the uplands, the people used to sing a particular kind of music, called "Cairn Music", and in his day (1837) these fires were so numerous as to give the island the appearance of a general conflagration.[1]

The custom of sometimes burning human effigies in these fires has been considered an indication that human beings were anciently sacrificed at these solemnities, but it is doubtful whether this be the true explanation. In heathen times, the sacred purifying "Wild-fire" was thought to be a beneficent and comforting spirit, and was the medium by which man was permitted to enter into communion

[1] J. Train, *Hist. of Isle of Man*, 1845, p. 314.

with the spirit world. The sacred flame upon the hearth, or within the temple, had the power of making food fit for the consumption of man, and the offerings that were consumed in the fire before beginning a repast, enabled the house-spirits, or the gods, as the case might be, to be partakers of the purified and spiritual essence of the food, and thus they shared in the feast of which they were the invited guests. By the use of fire, man was distinguished from the beasts of the forest, and was ennobled, and became an associate of the gods.

Therefore, we are not surprised to learn that, at these ancient bon-fire celebrations, men used to leap through the "Wild flame" as though encouraging it, and as if such act were some kind of lustration, esteeming themselves blest and purified by momentary contact with a divine spirit. Therefore, too, the cattle were driven through the purifying fire to preserve them from disease; and the fields were blest with its presence; hence all the fiery ceremonial, the rolling of burning wheels down hills, as though the sun was rushing down the slope of Heaven, the torch-light processions, the whirling of burning discs, the brandishing of lighted brooms about the fields. By such rude and artless demonstrations it was thought that "the holy flame", the divine spirit, the mediator between men and gods, would be the means of causing the prayers of the people to be acceptable to the Spirit of Heaven, and cause the sun, the celestial judge, to shine upon the land and render it fertile.

## Has the May-pole ever been raised at Stonehenge.

In connection with May-fires, we have well-known May-pole usages, which poetically denote the reinvigoration of nature beneath the warm rays of the sun, and signalise the coming in of summer. These customs are still vigorously maintained in many parts of Europe, and as far east as India. They were proscribed in this country by the Puritans as ungodly abominations, and although attempts were made to revive them at the time of the

Restoration, they gradually faded away, and may be said to be extinct; it is, however, only a few years since a Maypole was raised within a couple of miles of Stonehenge. The accounts of May usages are very numerous. On May-eve the villagers used to betake themselves to the woods, from which in the morning they brought back the May-pole, dragged by twenty or forty yoke of oxen, all decorated with flowers and bright-coloured ribbons, and followed by a crowd of men, women, and children. The pole was then reared, with flags streaming from its top, and the people danced and rejoiced around it, and refreshed themselves in the summer arbours which they set up hard by. The summer maidens who used to go from house to house singing verses, and who brought the blessing of summer to each household, were often accompanied by some leaf-clad personage, a Jack-in-the-Green, representing the new-born verdure, and the chief mummers impersonated the unseen rulers of the season, and styled themselves King and Queen of May. In Ireland May-day was not only called the day of Beal's fire, but "La Bile tenidh", the day of the Fire-tree, "Bile Tineadh", "Tree of the fire". We are assured by Mr. Fitzgerald that the "usage yet survives in Galway, Donegal, Westmeath, and elsewhere, of planting a May-tree or May-bush before the farm-house door, and eventually throwing it into the bonfire."[1]

We have been led to conclude that the season of May was consecrated to Mercury, the son of Jupiter and Maie, one of the Pleiades, who names the month. The ancient symbol for the god is ☿, and the crescent horseshoe combined with the full disc are symbols which compose the temple of Stonehenge. The classical Mercury bears a mystical instrument in his hand of such potent magical energy that it could restore even the dead to life. This is named the caduceus, and consists in its most usual form of the lunar symbol of the crescent and full disc formed by serpents, crossed by a straight rod or sceptre. The caduceus

[1] David Fitzgerald, *Revue Celtique*, vol. iv, p. 192.

is believed to be of Egyptian origin. Sir Gardner Wilkinson says of the god Pselcis, the Egyptian Hermes: "The Ibis was sacred to him as well as to Thoth (the Moon), of whom, indeed, he may possibly be an emanation. In his hand he frequently bears a staff, surmounted by the head of a hawk, the emblem of Ra (the Sun), with a snake twined round it." "From this," he adds, "the idea of the caduceus of Mercury may have been derived."[1] The rod or sceptre of the caduceus has the same significance as the royal staff of the Sun, carried by the Egyptian Mercury, and shows that the god has command over the sun's rays. But why, we may enquire, was the snake entwined about the royal staff, and why do two serpents form the lunar symbol of the caduceus? The answer appears to be, that these mystical creatures have reference to the Moon as the fœcundatrix and pluvial goddess. To this day it is common enough to hear the country-born, who flatter themselves that experience has taught them to be weather-wise, express the belief that the weather will change with the phase of the moon, although, in truth, the rainfall is in no way influenced by this luminary. Systematic observation has taught us that of terrestrial phenomena the moon is responsible for the ocean tides only. Not so thought the ancients. The aspect of the moon was consulted for choosing times propitious for cutting the corn, for expressing the juice of the grape, and for the cutting of timber. Not only did men believe that the orb ruled over the juices of vegetables, but likewise over the humours and ailments of humanity; it influenced child-birth, and the condition of those suffering from mental derangement. We begin by enquiring how was it that the deadly snake gained the distinction amongst the ancients of being chosen as a symbol of life, and of figuring in endless fanciful stories and myths?

We find it represented as a "beneficent inviolable creature." A serpent is twined about the rod of the divine Æsculapius, "the

[1] Sir Gardner Wilkinson, *Ancient Egyptians*, pp. 44, 162, 170, 203.

blameless Physician", and serpents lay beside healing fountains. The serpent is wise, it is a symbol of life and health, and it is associated also with rain. It is, indeed, true that superstitions connected with the serpent have varied, at different times and amongst different races in widely different stages of civilization, and that such tales have been used for opposing purposes; nevertheless, so far as it is possible to give a direct answer to such a question, it may justly be maintained that the mystical character of the serpent depends in chief measure upon its most obvious and astonishing natural characteristic, which is, its amazing faculty of moving rapidly without the assistance of legs; thus its quality of gliding led to its being associated in idea with the gliding or aqueous element, thus it was aptly likened to the course of a gleaming and fertilizing stream, "with serpent error wand'ring".

The fertilizing aqueous element does not limit itself to rivers, but sails through the air in clouds, which distil in rain; when the crawling snake is provided with wings it becomes a dragon. In the summer time, when the clouds collect and silently creep along the mountain tops, obscuring the beneficent sun, then the forked-lightning darts from the jaws of this creature of the imagination, and she expires, pierced by the fiery sword of the sun-god, or falls a victim to his golden arrows.

At the close of day, when the clouds gather on the horizon against the golden sky, we can understand why the worm-dragon was fabled to grow very fast; why, in popular belief, it frequents exposed and lonesome heaths, where it guards a glittering treasure; why it lies upon a bed of gold; and why, all fire and glitter, it was fabled to carry the treasures it guarded through the air by night.[1]

Vegetable life depends upon the sun's heat and upon moisture. When these two great productive influences in nature are personi-

[1] For German beliefs in the dragon, see J. Grimm, *Teutonic Mythology*, vol. ii, p. 687.

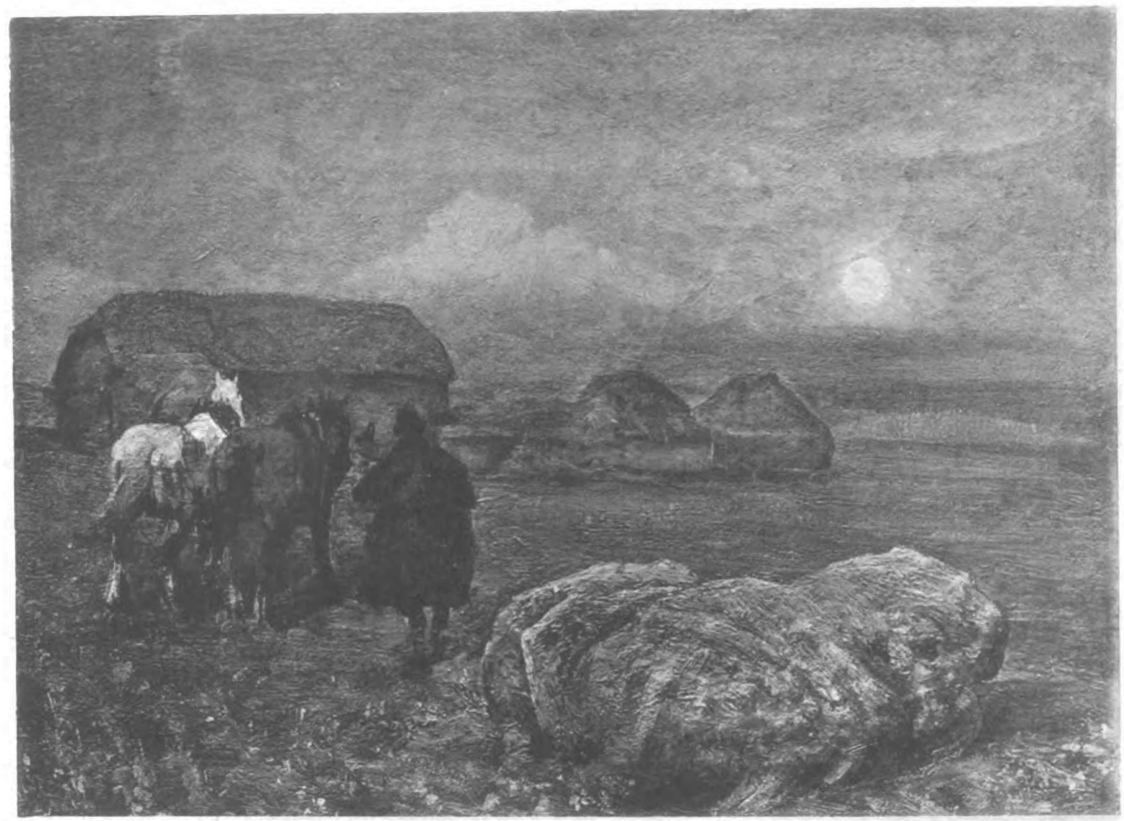
fied they are naturally represented as male and female. "Among the elements and principles whereof are composed natural bodies", says Plutarch, "fire is the male and water the female" . . . . . "Fire without humidity yieldeth no nourishment, but is dry, and moisture without heat is idle, fruitless, and barren."[1]

Some writers have thought that the disc of the caduceus refers to the sun; it will, however, be perceived that the same animals which form the disc form also the lunar crescent, and it is difficult to believe that the Greeks would invent a symbol composed by well-drawn serpents which should, up to a particular vertebra, symbolise the sun, and the remainder the moon. Clearly throughout their length these serpents symbolise the same thing, viz., the aqueous or gliding element, which was supposed to be influenced by the moon; the two figures which they form are, therefore, the lunar crescent and full lunar disc, a symbol of increase, as the serpent is a symbol of fertility; whilst the sun is represented by the royal staff which transfixes them.[2]

The Maypole, crowned not by the hawk, but by the bird of dawn, whose clarion note awakes the god of day, decorated with streamers and bound about spirally with garlands of flowers, the offspring of the vernal rains, raised when Mercury, the god of the season, heralds the coming of summer, has a symbolic meaning similar to the caduceus. It would have been singularly in place if formerly it was raised within the mystic figures of the temple of Stonehenge. Certainly it is noteworthy that the Blue-stone, No. 68, near the western end of the Altar-stone, has an even groove running the length of its western side, which suggests that once a pole was lashed to it.

[1] Plutarch, *Roman Question*, i.

[2] For Caduceus, see Rev. J. Bathurst Deane, *The Worship of the Serpent*. Dragons drew the sacred car of the goddess Ceres, and were symbolical also of the Ephesian Diana and of Cybele, the mother of the gods. The celestial dragon was a North Pole constellation, supposed to have been invented by the Babylonians, whose land was fertilized by the Euphrates, which sprang from the north.



THE DURRINGTON STONE.

### Midsummer Fires.

The Midsummer Belteine resembles that of May. In the middle ages Midsummer festivities appear to have been observed with much vigour in the cities of France, as well as in this country.

Strutt gives the following account:—"On the vigil of St. John the Baptist, commonly called Midsummer Eve, it was usual in most country places, and also in towns and cities, for the inhabitants, both old and young, and of both sexes, to meet together and make merry by the side of a large fire made in the middle of the street, or in some open and convenient place, over which the young men frequently leaped by way of frolic, and also exercised themselves with various sports and pastimes, more especially with running, wrestling, and dancing. The youth danced round the flame with garlands of motherwart, and vervain, with violets, looking at the fire through the flowers; and the doors of the houses were shaded with green birch, long fennel, St. John's wart, and with garlands of flowers. Nor were these picturesque customs confined to rural places and smaller towns; for in the City of London we read 'of standing watches habited in bright harness' in every ward and street, and of a marching watch, consisting of two thousand men, bearing seven hundred blazing cressets. These appeared 'in appropriate habits', those of the musicians and the mounted standard-bearers being especially gorgeous. The Lord Mayor rode forth with his sword-bearer and his waits or city minstrels, and torch bearers, and henchmen, and the Sheriff's watches came one after another in like order."[1] It is evident that all these fiery ceremonials are not at all appropriate to St. John the Baptist, but are survivals of an older religion.

The wide geographical area covered by the ancient practice of lighting sacred bon-fires at certain seasons, and the highly poetical significance of these customs, combine to give them a

[1] J. Strutt, *Sports and Pastimes*, p. 267 *et seq.*

singular interest. Facts, such as those recorded by Mr. Train of the Isle of Man, within the memory of the present generation—the greater part of the population congregated on the hill-tops to witness these celebrations, the bon-fires so numerous as to present the appearance of a general conflagration—justify us in believing that, in ancient times, the total number of sacred fires lighted at Mid-summer must have been very great.

## Harvest Homes.

There are records of feasts and fairs in Ireland associated with Sun-worship; these occurred in the beginning of the month of Augustus, and correspond with the English lammas. They are named Lug-nassed, from Lug, the Sun-god. Prof. Rhys (*Hibbert Lectures*, 1886) gives a full account of this celebration. According to him, the chief thing the festivities were meant to record was "Lug's wedding the kingdom", and it was also a feast of first fruits, and solemnised the successful ripening of the corn. In the Isle of Man the day for the oblation of grain was kept on the first Sunday of August, on which day the people went in great numbers to the tops of the hills, or visited the sanative wells. "The reapers, at the close of the harvest," says Mr. Train, "build up with ribbons the last handful of corn that is cut, and bear it in procession to the top of a neighbouring hill, and there, while the Queen of the Mheillia (or harvest home) waves the corn, or kerm, baby over her head, the reapers express their joy in loud huzzas." The kerm baby occurs also in English custom. Strutt quotes a 16th-century account of an English harvest home, in which a richly dressed image figures, thought to signify Ceres.[1]

The Manx harvest festival was held on Augustus day, a feast in honour of the deified Emperor, a date agreeable for a harvest thanksgiving in the south of Europe. According to the placing

[1] J. Train, *Isle of Man*, p. 122; and J. Strutt, *Sports and Pastimes*, p. 271.

of the cleft of the western trilithon, we should expect the festival to have been held at the end of the month; certainly a more prudent date for a thanksgiving for the successful garnering of the corn harvest.

### November Fires and Customs.

The accounts of these celebrations are very numerous, and this season more than any other offers examples of survival of pagan rites. In Ireland, these fires were named Samhtheine, or Peace-fires, and in Wales they were called "Coelcerth". They celebrated the Calends of Winter, when the sun's heat is feeble. Presumably the demons of winter were thought to rejoice at the restricted powers of the sun, for at this season we read of wild revels in honour of the "Lord of Misrule", who began his reign at Allhallow Eve, and continued the same till the morrow after the "Feast of the Purification". The following sixteenth-century account is quoted by Strutt: "First of all the wilde heades of the parish flocking together, chuse them a graund Captaine of Mischiefe, whom they ignoble with the title of the 'Lord of Misrule', and him they crowne with great solemnity and adopt him King. This King annoynted chooseth forth twentie, forty, three score, or an hundred lustie guttes like to himself, to waite upon his lordly majesty. . . . This heathen company march towards the church, though the minister be at prayers. . . . . In the church yard they have commonly their summer halls, their bowers, arbours, and banqueting houses set up, therein they feast, banquet, and daunce all that day, and, peradventure, all that night too, and thus these terrestrial furies spend the Sabbeth day."[1]

Such proceedings, it is supposed, have been derived from the ancient Saturnalia, or Feasts of Saturn, when masters waited on their servants; and so vigorous were these survivals that, in the Middle Ages, the cathedral churches even were invaded by the

[1] J. Strutt, *Sports and Pastimes*, p. 254.

motley crowd, and the more uproarious ate, drank, and played dice upon the altar, by the side of the priest who celebrated the Mass.

We have presumed that the northern trilithon of Stonehenge was formerly associated with a November festival; the season when the powers of nature appear to grow restricted.

At the back of the northern pier, *in situ*, is a large cavity Had this stone been placed on the opposite side of the temple, then the "eye of heaven" would every day at noon have rested

upon this unsightly peculiarity, and we feel it would have been a blemish; placed where it is we do not.

### Spring Fires and Customs.

In the Isle of Man, Easter fires used to be lighted, and sportive fooleries observed on Shrove Tuesday. Strutt mentions Shrove-tide practices: "The Fool's Plough", or "Ploughman's Holiday", when a decorated plough was taken round the village and contributions solicited. Cock-fighting, and throwing at cocks, were common customs: an instance of the latter cruel sport occurred this spring (1891) at a village not fifty miles from London. In

Germany we find the practice of making a straw figure of a man, which is dressed up in old clothes and named "Metziko", or the Woodman, which is supposed to have the power of guarding the cattle from wild beasts: it is in the early spring that the cattle emerge from their stalls and are driven to the pastures. A village procession carries the guy, with much revelry, into the woods, where they dance around it, and leave it tied up to a tree. We find a similar custom in France at Easter; the straw man, named the "Grand Mondard", is carried out in procession and tied to the oldest apple tree. These performances represent, so it is presumed, the carrying out of the genius of vegetation at the commencement of spring. We find, also, the custom of carrying out Death, when a similar straw man, after having been taken round the village, is carried out into the country and thrown into a river, the villagers on their return being rewarded with eggs; and they say they have carried away Death and brought Life back. This takes place on the first of March. The guy is sometimes buried, or is soused with water, or reviled and burnt. In May we have the leaf-clad personage, Jack-in-the-Green, and Father May, and the May tree is burnt either in the May fire or in the Midsummer fire; at the end of February we have the figure of "Death", and the figure of the guardian "Woodman". The same idea underlies all these performances, for, according to Mannhardt, who records a vast number of customs, and is an authority in these matters, the leaf-clad personage does not so much represent *the time of year* as "*the genius* of summer vegetation", or "the force of summer vegetation". His winter equivalent is represented as dead or killed; Death, therefore, in these customs represents vegetation killed in the winter time; not a nature power which takes away life, not winter is abolished, but it is the dead genius of vegetation which is buried or soused (just as the dead leaves are rained upon and are buried in the soil), in order that in the spring it may spring up again into new life out of the reawakened ground.[1]

[1] W. Mannhardt, *Der Baumkultus*, 1895, p. 418.

With the expiration of winter at the end of February, the season fit for the enterprises of war commenced, at any rate, in the south of Europe; therefore, amongst the warlike Romans, the incoming month was not named after Apollo or Venus, but after the lover of that goddess, namely, Mars. On the first of March the Salii, or priests of Mars, danced in measured motions through the streets of Rome. Their name seems to have been derived "a Saliendo", or "Soltando", because during their festivals it was particularly requisite that they should leap and dance.[1]

The customs we have reviewed have to do with the ebb and flood of vegetable life, due attention to which is essential to the well-being of man.

Some of these performances are still practised; others have been recorded over a thousand years after the religion of which they may be said to have formed a rude ritual became extinct.

Their meaning has long since been lost to the people, who have, nevertheless, continued to enact them; they have, therefore, been recorded when in a state of degradation.

Originally they must have set forth and honoured the power of the sun, and probably were serious religious rites whereby men sought to influence the god, and to be blest by him.

---

In conclusion, we take a retrospective glance at the results of our inquiry. To begin, there is the striking fact that Stonehenge consists of stones foreign to the neighbourhood, and belonging to geological formations widely apart; proof that its construction was a far greater undertaking than the present appearance of the ruin would lead any one to suspect, and of the power of the founders to organize labour on a very considerable scale.

This is specially shown by the case of the Blue-stones, which,

[1] *Lamprière.*

BARROWS ON BEACON HILL.

according to the judgment of experts, are foreign to this country, and which, so it has been concluded, from the weathered surfaces of some of their chippings, were, like the larger Sarsens, never quarried, but derived from boulders left on the surface, or, more probably, were brought from some sea-washed shore.

The labour of carrying these stones up from the coast was no mean one, and that they should have been transported across the sea is not merely a conspicuous proof of the resources of the founders, but indicates either that those who controlled the work were themselves moved by a strong sentimental motive, or that they played upon a strong sentimental feeling animating others, otherwise so laborious and unusual a course, and one so uncalled for by any utilitarian purpose, would never have been pursued.

The dictum of petrologists, that the Blue-stones are of foreign origin, is in harmony with the tradition that the stones have been transported hither by sea. The geological formation of Brittany points to that country as their probable source, a probability greatly strengthened by historical considerations. Geoffrey of Monmouth, when giving an account of additions effected by King Aurelius to the monastery at Amesbury, followed a tradition which stated that a stone circle was taken down and utilized for that purpose. We have no reason to believe that Geoffrey had knowledge of Stonehenge, situated a mile distant west of the monastery; and mystified by another tradition which stated that the stones had been shipped, it appears that he in consequence concluded that the stone circle in question must have been situated in Ireland; thus he kept to the right direction for their source, whilst considerably exceeding the real distance.

It is incredible that Aurelius should have brought his building material from that country; he had not the power, supposing he had the crazy desire to do so; he had no fleet, and the sea was commanded by piratical Saxons, his deadly enemies. In the introduction of the Irish incident we, therefore, recognize Geoffrey's embellishments; we here see the old familiar artifice of making an incredible story appear veracious, by the introduction of circum-

stantial details, thus in the thick of the Irish embroglio he makes his characters orate in the time-honoured classical and biblical manner.

The Altar-stone belongs to a different geological formation to either the Wiltshire Sarsens or the foreign stones, and affords another proof of lavish expenditure of labour; whilst the shaping of the rocks, and the manner in which the superimposed blocks are securely locked in their places by means of tenon and mortise, evidences the attainment of considerable skill.

Moreover, it is a striking fact that these rocks, collected with prodigal labour from sources so widely apart, should have been set up on a bare and desolate down, the surrounding land for the space of several miles being more thickly studded with barrows than any other district in this country, which produces a strong impression, the correctness of which is fully confirmed by closer scrutiny, that the ruin and the gravemounds are in some way connected. We noted the critical positions of the outlying stones, and that mysterious alignments proceed from the ruin and traverse the barrow-studded plain.

The design has manifestly not been dictated by utilitarian necessities, or by æsthetic sentiment, it shows the temple to have been dedicated to Sun-worship, the stones being so disposed as to form religious symbols; the meaning of that symbolism we have endeavoured to explain, and in doing so we have followed ideas once current in Gaul.

The unity of the design was proved by the relative proportions of the parts, and that the different parts were raised at the same epoch is further attested, first, by the finding together of pieces of the different sorts of stone used in the construction within a grave-mound, and, secondly, by chippings of all the rocks having been found in the concreted substance around the bases of the Blue-stones. When thus proving the unity of the design, we proved also that the temple is not of prehistoric antiquity, for we have no reason to believe that the ancient Britons were capable of adjusting their buildings with a knowledge of geometry.

The conclusion that Stonehenge is a temple affords an explanation of the Avenues, and of the great enclosure, or "Fairfield", unreasonably named the Cursus, as a place where the people who attended the temple festivals encamped. The multitude were thus kept apart from land sanctified by the presence of the gravemounds. The Avenues teach us that the land was studded with barrows when Stonehenge was constructed, otherwise there would have been no occasion to make these Earth-works.

In regard to the trilithons of Stonehenge, we found this arrangement to be unique in this country, but that examples very similar to those of Stonehenge are to be met with abroad; and we concluded from their distribution that this feature is derived from the south, and is a proof of comparatively late date, for until the consolidation of Roman power in Gaul, the natives of this country were cut off from such intercourse with people under Roman sway as could have led to the introduction of this foreign feature into a native temple.

The testimony of the trilithons in regard to date, agrees, therefore, with that of the symbolism of the temple as here interpreted.

The study of the proportions and manner of plotting of Stonehenge, the skill shown in construction, the introduction of foreign stones, the discovery of Roman shards and of iron buried deep beneath the surface of the soil and within the precincts, all point to the same conclusion, viz., to intercourse with the south, and to post-Roman date; whilst the connection of the temple with the gravemounds is proof of Celtic origin.

We have concluded, therefore, that Stonehenge belongs to a brief transitional period, and was raised by British chieftains subject to Roman influence; that the policy Agricola pursued towards the chieftains accounts for the presence of this strange structure on the Wiltshire Downs, whilst the social conditions which rendered its construction possible, can have endured but for a few years.

Agricola himself was closely associated with the south of Gaul

as well as with Britain. As quite a young man he was sent to pursue his studies at Massilia, a place where Grecian politeness and provincial frugality were happily united; there he engaged in philosophical speculations with an ardour which was deemed unbecoming by his friends. From the University he went to Britain, where he studied the rudiments of war at the time of the revolt of Boadicea. Having married, and filled the offices of magistrate in Rome, of quæstor in Asia, and tribune of the people, he was appointed, on Vespasian becoming Emperor, A.D. 69, to the command of the 20th legion at Deva (Chester), and later, having been raised to the patrician order, was invested with the government of Aquitania, which he held for three years.

Following this appointment in the south of Gaul, he was made Governor of Britain, and the Pontificate was added to his other dignities. On his arrival in this country he energetically suppressed abuses which threatened to drive the population to acts of desperation, and the following year, A.D. 79, we are told "that in order to reclaim the natives from that rude and unsettled state which prompted them to war, and to reconcile them to quiet and tranquility, he incited them by private instigations and public encouragements to erect temples and houses". "He was also attentive to provide a liberal education for the sons of their chieftains."

In these early days of occupation there could have been little indeed to allure native chieftains to a Roman camp. If their sons remained in camp they must have felt themselves ill at ease, and in the position of hostages; if they remained amongst their own people, their tutors probably played the part of political agents—through them may have passed those private instigations of Agricola "to be prompt in complying with his intentions", we are told "he would know everything, but was content to let some things pass unnoticed." However this may be, it is clear that the tutors held very anomalous and responsible posts, and that they were backed by a governor who was all powerful, and a man of noble genius; we also know that Massilia was the centre of

learning for Western Europe, the words, therefore, of Tacitus infer relations more or less direct between that centre and British chieftains. Strabo tells us that in his day the schools of Massilia enticed the noblest of the Romans thither in preference to Athens, and that the Gauls readily devoted themselves to the pursuit of learning, "and that not merely individuals, but the public generally, professors of the arts and sciences, and likewise of medicine, being employed not only by private persons, but by towns for common instruction."[1]

As the Roman camps changed rapidly into towns, these would attract both rich and poor alike. The chieftains, having lost their independence, no longer maintained armed retainers, and betook themselves to the rising towns, whilst broken men were forced to turn their steps in the same direction in order to seek employment. The chieftains "at length gradually deviated into a taste for those luxuries which stimulate to vice—porticos, and baths, and the elegancies of the table; and this from their inexperience they termed politeness, whilst, in reality, it constituted a part of their slavery."[2]

A very similar condition of society has occurred in our time in Algeria, with, however, one profound difference. In the modern instance the wise policy initiated by Augustus, and which at the time of the Conquest had been maintained in Gaul for nearly a century, of gradually assimilating the gods of the vanquished with those of the conqueror, has been an impossibility.

When we consider the evil condition of British tribes suffering from base misgovernment, such as that mentioned by Tacitus, can we conceive a more politic measure to pacify the people fearing destruction, or more likely to keep the unruly employed, than an undertaking like the raising of Stonehenge, which entailed distant expeditions and a vast amount of rough manual labour, under the leadership and keeping of native chieftains?

[1] Strabo, Bk. IV, c. i, *The Narbonnaise.*
[2] Tacitus, *The Life of Agricola*, c. xxi.

Thus, also, can the presence of the foreign stones be accounted for. The destruction by Julius Cæsar of the Veneti and others—the ancient allies of the Britons—along the coast of Brittany, must have left an ominous tradition of the results of Roman conquest; and we may well believe that a positive assurance that people of their own race and speaking their language flourished beyond the seas under Roman sway, may have accompanied these foreign stones, and heartened the long-suffering Celts of southern Britain.

# LIST OF AUTHORS ON STONEHENGE,

## IN CHRONOLOGICAL ORDER;

*Showing the various theories which have been propounded to account for the structure; with references to the discovery of objects within the precincts.*

---

GEOFFREY OF MONMOUTH; before the year 1139.

An account of the Giants' Dance (Stonehenge) confused with the story of the massacre of British chieftains by Hengist the Saxon, at Amesbury.

(*See* Bohn's edition, *Six Old English Chronicles*, 1885; Geoffrey's *British History*, Chap. xi, *et seq.*)

HENRY OF HUNTINGDON, who died after 1154.

"Stanenges (Stonehenge), where stones of a wonderful size have been raised upon the manner of doorways, so that doorway appears to have been raised upon doorway, nor can anyone conceive by what art such great stones have been so raised aloft, or why they were there constructed."

WACE, 1171.

An Anglo-Norman translation of Geoffrey's history.

GIRALDUS CAMBRENSIS, 1187.—*Topographia Hibernica.*

An allusion to the same story.

ROBERT OF GLOUCESTER, 1278.

Geoffrey's history versified.

LELAND, died in 1552.—*Commentarii de Scriptoribus Britannicis*, Vol. i pp. 42-48.

Another allusion to Geoffrey's story.

L. D. H., 1574.—MS. Brit. Mus. In Dutch.

"Short account of English events"; with drawing, see reproduction, p. 14.

CAMDEN'S BRITANNIA, 1575.

Gives the tradition that the stones were erected by Ambrosius Aurelianus; and speaks of Stonehenge as a huge and monstrous piece of work, such as Cicero termeth "insano substructio"; "but seing it cannot fully be described by words, I have subjoined the sculpture of it." A reproduction of this engraving, apparently designed to harmonize with the quotation from Cicero, has been given, p. 15.

The delvers represented in the foreground have been honoured by mention by more than one writer. Mr. Fergusson (*Rude Stone Monuments*, p. 105) calls attention to them. A curious fact is mentioned by Camden; at a spot marked C outside the vallum, men are represented as making an excavation, and the reference is, "place where men's bones are dug up"; the chief interest of this episode being that it is "an indication of the spot where bones may yet be found in Avebury." He, however, goes on to explain that he believes Stonehenge also to be a sepulchral monument, and "that the principal interment at least was not inside the circle, but situated externally on one side." For destruction of Mr. Fergusson's Avebury theory, see *British and Roman Antiquities of North Wiltshire*, by the Rev. A. C. Smith, p. 143.

Professor Flinders Petrie, *Stonehenge*, note p. 24, mentions the place in Camden's print, dated 1575, where "men's bones are dug up." "It might possibly refer to the group of barrows out behind No. 19."

Sir R. Colt Hoare observes, *Ancient Wilts*, p. 134: "He (Camden) makes so palpable a mistake in the number of the circles, that I question if he ever visited them himself."

EDMUND SPENSER, 1590.—*The Faerie Queen*, Book II, Canto x verse lxvi.

Makes mention of Stonehenge and the Amesbury massacre.

INIGO JONES, was commissioned by King James I, who visited Stonehenge 1620, to write an account of the monument.—*Stone-Heng Restored.*

P. 49.—"Now, concerning the use for which Stone-Heng at first erected, I am clearly of opinion it was originally a temple."

P. 48.—"For my part, I should choose to assign those times for building thereof, when the Romans in their chief time betwixt Agricola's government formerly mentioned, and the reign of Constantine the Great; in order to which, the times rather somewhat after Agricola, if not during his own lieutenancy, than next preceding Constantine."

P. 69.—He mentions finds of beasts' heads.

WALTER CHARLETON, M.D.—*Chorea Gigantum, vulgarly called Stone-Heng, restored to the Danes*, 1625.

"I say, why may I not conjecture that the Danes, and only the Danes, were the authors of Stone-Heng?"

"I adventure to acquaint you, moreover, with my conjecture concerning the time when Stone-Heng was first set up; which I take to be in the beginning of the reign of that excellent Prince, Alfred."

"I am apt to believe that (the Danes) having over-run the whole kingdom . . . . . and encamping their main army in Wiltshire for near upon two years together . . . . . they employed themselves, during that time of leisure and jollity, in erecting Stone-Heng, as a place wherein to elect and inaugurate their supreme commander, King of England."—(Pp. 47 and 48.)

JOHN WEBB.—*A Vindication of Stone-Heng restored*, 1625.

Follows his kinsman Inigo Jones in believing "our antiquity to be a work of the Romans", a temple of the Tuscan order, dedicated to Cœlum.—(Pp. 218 and 219.)

(For finds of heads of beasts, see pp. 97, 123 and 125, and p. 124 mentions the discovery of the lid of a stone vase, of which he gives a drawing, and of a huge old nail.)

JOHN AUBREY, 1665.—*Monumenta Britannica*, vol. i; *Templa Druidum Stoneheng*, MS. in Bodleian Library.

"Now my presumption is, that the Druids being the most eminent order of priests among the Britaines, 'tis odds, but that these monuments

(Avebury and Stonehenge) were temples of the priests of the most eminent order, viz., Druids, and it is strongly to be presumed that they are as ancient as those days."

"George, Duke of Buckingham, when King James I was at Wilton, did cause the middle of Stoneheng to be digged . . . . . this under-digging was the cause of the falling down or recumbency of the great stone there, 21 foot long. He also caused then a barrowe (or more than one) to be digged, where something was found, but what it was Mrs. Mary Trotman, who lived then at the Farme of West Amesbrius, to which this monument belongs (to whom I am obliged for her very good information of this place) hath forgot." Also, according to the imperfect memory of Mrs. Mary Trotman, "here were also then found Stagges-hornes, a great many batter-dashers, heads of arrowes, some pieces of armour eaten out with rust, bones rotten, but whether of Stagges or men they could not tell." The learned have been at a loss to know what the lady meant by "batter-dashers". Neither Aubrey nor Johnson help us out of the difficulty.

(Passages quoted by Sir R. Colt Hoare, who had Aubrey's MS. in his possession when he wrote, quoted afterwards by W. Long.)

W. STUKELEY, M.D.—*Stonehenge, a Temple restored to the British Druids*, 1740.

He is the first author who mentions the alignments in connection with Stonehenge. The orientation of the Cursus and the Long Avenue led him to conceive the quaint theory that the temple and its earthworks have been set out with the help of the magnetic needle, the properties of which, he thinks, were known to the Phœnicians. He assumes that the founders proposed to plot the Cursus due east and west, but failed, owing to the declination of the magnetic needle from true north point. He concludes that the temple was erected B.C. 460, "not long after Cambyses' invasion of Egypt, when he committed such horrid outrages there, and made such dismal havock with the priests and inhabitants in general. . . . . 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." "This was at a time when the Phœnician trade was at its height, the readier a conveyance to Britain."—(Chap. xii ; see pp. 65 and 66.)

He speaks of the Cursus "as the finest piece of ground that can be imagined 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 British charioteer may have a good opportunity of showing that dexterity spoken of by Cæsar." "They set out on the south side of the Cursus and returned by the north side. I observe the ditch and bank towards the eastern end of the Cursus much obscured, by the trampling of men and horses frequenting the spectacles here, this being the most thronged."—(Pp. 41 and 42.)

(For mention of finds, see pp. 31 and 32. He says: "On July 5, 1723, by Lord Pembroke's directions, I dug on the inside of the Altar, about the middle, 4 feet along the edge of the stone 6 foot forward towards 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.")

JOHN WOOD, Architect, of Bath, 1740.—Brit. Mus., *Harleian MSS.*, 7354 and 7355. *Descriptions of Stanton Drew and Stonehenge.*

He believed Stonehenge to be a temple of the Druids sacred to the moon, erected about 100 B.C.

He gives a ground plan, and shows the outer circle composed of 30 piers and the like number of architraves, and restores the inner circle on the assumption that the uprights should be equidistant; he concludes that the Blue-stone Circle consisted of 29 stones, and that these also supported architraves. If such a circle were complete it would have 29 architraves; he speaks, however, of 28, which he says "allude to the days in which the moon performs her revolution; but as her motion don't answer whole numbers, the inward row of 19 stones (the inner Blue-stones) discover the cycle which regulates her motion, and brings her to the same course again; the 30 architraves of the first row of pillars represent the revolution of time deemed by the Druids an age."

"The different colours of the stone made use of in this work are the true symbols of good and evil, and in our antiquity seem to have been introduced to preserve the idea of the chief principles of the old Magian religion and the reformation Zoroaster made in it."

Rev. W. COOKE, 1754.—*An Enquiry into the Patriarchal and Druidical Religion.*

Stonehenge has been a place held sacred by the Druids, and appropriated to civil or religious assemblies.

Dr. W. BORLASE, A.M., etc.—*Antiquities of Cornwall*, 1754.

P. 186.—Attributes the circle of Stonehenge to the Druids. "There is such a wildness in this grand structure, that to imagine it of Roman erection after Julius Cæsar's time is too groundless a supposition to be worth confuting."

BENJAMIN MARTIN.—*The Natural History of England*, Vol. i, 1759. Wilts, with view of Stonehenge, and restored ground plan.

Ignoring the obvious fact that the greater bulk of the Grey Wethers of the Marlborough downs is embedded in the soil, he remarks, "There is no stone among the Grey Wethers that I could ever observe so large as to equal in bulk any of the lesser sort of Stonehenge." He concludes that the rocks of Stonehenge are fictitious. "That it is possible they might be made by Art, no man can dispute."—(P. 103.)

D. JOHN SMITH, 1771.—*Choir Gawr, the Grand Orrery of the Ancient Druids, commonly called Stonehenge.*

The five Sarsen trilithons, with two Blue-stone trilithons of the inner circle, were, he conceives, dedicated to the seven planets. These stones "give that oviform, or egg-like shape to the earth. This is the serpent's egg, or *ovum mundi* of the ancients, who were entirely ignorant from whence it proceeded. The Druids, in the creation of the world, conceived all nature to spring from this egg of the earth."

The position proposed for these Blue-stone trilithons is shown on his restored ground plan, here given, p. 57.

"The outward circle of the temple consists of 30 pillars; these, multiplied by the 12 signs, make 360, as many days as were reckoned in the ancient solar year." "The inner circle is the lunar month. Between it and the great ellipsis you see the phase of the moon when she is six days old. . . . . At the upper end of this circle there are six stones standing close together, by which are expressed the harvest and hunter moon; she at these seasons rises six nights together with little variation."

WARLTIRE, 1792; Lect.

Stonehenge is a vast theodolite for observing the motions of the heavenly bodies. It had a meridian line, ten miles in length, at the time of its formation, from which the present meridian line varies forty-seven degrees, etc., etc.

Mr. MAURICE.—*Indian Antiquities*, Vol. vi, p. 128. Note on Stonehenge.

Gives six reasons for connecting Stonehenge with astronomy :—

1. Its circular form appropriate to Sun-worship.
2. The oval form of the adytum representing the mundane egg.
3. The pointing of the grand entrance.
4. The number of stones of the outer circle, uprights and lintels being exactly 60, alludes to the sexagenary cycle of Asiatic astronomy ; in like manner the inner stones, being 19 in number, refer to the matonic or Indian cycle, and the Blue-stone circle of 30 stones points to the celebrated age or generation of the Druids.
5. The temple being uncovered, "proves it to have been erected under the impression similar to those which animated the ancient Persians, who rejected the impious idea of confining the Deity."
6. "The heads and horns of oxen and other animals found buried on the spot, prove that the sanguinary rites peculiar to the solar superstition were actually practised within the awful bounds of this hallowed circle."

Lieutenant-General VALLANCEY.—*Oriental Collections*, Vol. ii, 1798.

The oriental emigrations of the Hibernian Druids proved by their knowledge in astronomy, collated with that of the Indians and Chaldeans. —(From fragments of Irish MSS.)

He holds similar views to Mr. Maurice in regard to the relation of Stone-circles and Astronomical-cycles.

JOHN BRITTON, 1801.—*The Beauties of Wiltshire*, p. 117, Stonehenge.

The memorials of Stonehenge, which are contained in the Triads and in the traditionary sayings of Wales, are evidences which I conceive to be conclusive, and as they are simple they require no further illustration. From these records, it clearly appears that Stonehenge was the work of the Romanized Britons, about the latter end of the fifth century.

The Rev. EDWARD DAVIES.—*Celtic Researches*, 1804.

"That this structure (Stonehenge) was sacred to the Druidical superstition is fully evident."

*Mythology and Rites of the British Druids*, 1809.—"Stonehenge, the most considerable of all the circular temples of the Druids." He follows

the views of Mr. Maurice, and says, "We learn from the *Gododin*, that the conference with Hengist and the fatal banquet took place upon the Ystre, or Cursus." His work is chiefly concerned with Bardic productions, of which he gives translations.

T. HEARNE, 1807.—*Description of Stonehenge*, with engraving, pub. 1786.

Sir R. COLT HOARE, Bart.—*The Ancient History of South Wilts*, 1812.

P. 170, *et. seq.*—"Stonehenge, the building set apart for their (the Britons) civil and religious assemblies."

P. 172.—"To the Celts (the same race who raised the megalithic monuments of Brittany and the Morbihan) I attribute the erection of Stonehenge, and the greater part of the sepulchral memorials that still continue to render its environs so truly interesting to the antiquary and historian." This statement of opinion is clear, although, from his account of the earthwork named Vespasian's Camp (see quotation, p. 2), most readers would conclude he thought it the work of the Belgæ, a race who passed over from the Continent into this country at a later date than the Celts or Gauls.

P. 159.—"The plan both of large and small Cursus corresponds so much with that of the Roman circus, that I feel inclined to think that the formation of these on our Wiltshire downs took place after the settlement of the Romans in our island, and that they cannot be deemed of British origin." He presumes that the chariot races started from the western end of the Cursus. British villages at Durrington and on Stoke Down he concludes to be Romano-British.

P. 151.—Mr. Cunnington propounds the question, "Why did the Britons, in erecting Stonehenge, make use of two kinds of stone?" and presumes that Stonehenge was erected at different æra. In reply, Sir Richard says, "I am much pleased with this new view respecting Stonehenge, *Se non è vero è ben trovato*, for it is not, like many others, founded on idle conjecture, but has some rational ground to rest upon." He concludes that the Blue-stones were a late addition, and gives a drawing of Stonehenge restored without them, and without offering any speculation to account for their presence.

P. 150.—He mentions that Mr. H. Cunnington dug in front of the altar in the same place as Stukeley, and found that the soil had been moved to nearly the depth of six feet, thus contradicting Stukeley's observation.

"At about the depth of 3 feet, he found some Roman pottery, and at the

depth of 6 feet some pieces of Sarsen-stones, three fragments of coarse, half-baked pottery, and some charred wood."

"In digging into the ditch that surrounds the area, Mr. Cunnington found similar remains of antiquity, and in the waggon tracks near Stonehenge you frequently meet with the chippings of the stones of which the temple was constructed."

"Soon after the fall of the great trilithon, 1797, Mr. Cunnington dug out some of the earth that had fallen into the excavation, and found a fragment of fine black Roman pottery, and since that another piece in the same spot."

P. 145.—He speaks of a discovery of burned bones beneath the western mound of the Earth-circle: "I scarcely know how we can separate the æra of the one from the other" (mound and Earth-circle). He gives a list of authors on Stonehenge. Mr. H. Cunnington also dug about the Slaughter-stone.

GODFREY HIGGINS.—*The Celtic Druids*, 1829.

He believes the arrangement of stones in this Druidical temple illustrate astronomical cycles of antiquity. "The outer circle of 60 stones is the base of the most famous cycles." The Blue-stones show two metonic cycles of 19 stones, etc.

From astronomical considerations he concludes that Stonehenge was built "about four thousand years before the birth of Christ." "A date" (he adds with some pertinence) "which will astonish most persons who have not been accustomed to examine subjects of this kind." (P. 158.)

The Rev. J. BATHURST DEANE, M.A.—*The Worship of the Serpent*, p. 327.

"Another form under which temples have been erected to the same deity (Apollo partaking of the attributes of the Sun and of the Serpent) is the circular, such as that of the magnificent Stonehenge."

JOHN RICKMAN, F.R.S., 1839.—*Archæologia*, Vol. xxviii.

On the antiquity of Abury and Stonehenge.

Concludes the latter to have been worked with steel tools.

Believes Abury to be the work of the third century, A.D., Stonehenge of the fourth, "or (to speak with due caution), that this temple was completed before the final departure of the Romans from Britain."

Rev. E. DUKE, M.A., ETC., 1846.—*The Druidical Temples of the County of Wilts.*

"My hypothesis, therefore, is as follows: That our ingenious ancestors portrayed on the Wiltshire Downs a Planetarium or stationary Orrery, located on a meridional line, extending north and south the length of sixteen miles; that the planetary temples thus located, seven in number, will, if put in motion, be supposed to revolve around Silbury Hill as centre," etc., etc.

Saturn is figured by Stonehenge, which he concludes to be contemporary with the erection of the Pyramids of Egypt; nor are we surprised to learn that the details of the stones are resolvable into every known astronomical cycle of antiquity.

H. BROWNE, of Amesbury, 1849.—*An Illustration of Stonehenge and Abury.*

The rocks which compose Stonehenge are evidently water-worn; assuming that this occurred *in situ*, also that all statements in the Bible are true, he very properly claims a prediluvial date for the temple.

"There is nothing of which persons in general appear to form more indeterminate notions than of the Deluge. This evidently arises from their not being accustomed to give their attention to it."

The Hon. ALGERNON HERBERT.—*Cyclops Christianus. An argument to disprove the supposed antiquity of Stonehenge and other megalithic erections.* 1849.

Upon the Roman Conquest he conceives that the seat of Druidical discipline was removed from Britain to a more secure asylum in Ireland, and that when the Romans left Britain a free State, dependent upon her own resources, the heathen parts of the population, and that portion professing Christianity, were fused in a sort of freemasonry, by means of a new comprehensive faith. Amesbury, at this critical juncture, became a new centre of government and the seat of a reformed Druidism; an event which accounts for the erection of Stonehenge.

The stones may not have been brought over, but there was a transfer of jurisdiction. "The British mysteries were expressed by the Bards and Bardists under the name of 'the Cauldron', of which they speak often with extreme enthusiasm."

Thus "the Cauldron of Regeneration," which had been conveyed to Erin, was retransferred and deposited at Amesbury. He says, "I cannot

refrain from thinking the megalithic circles of this island were once sacred to St. Brighid of Kildare, who was at the same time 'the Vesta of Fire' and 'the Virgin Mary', not by assimilation of virtues and all spiritual graces, but by reappearance of Christ's very mother, with the same form and features."

QUARTERLY REVIEW, Vol. ciii, 1858, p. 113.—*Wiltshire.*

"The awe inspired by Stonehenge is heightened by the mystery that enshrouds its origin and purpose. In spite of all the learned lucubrations that have been employed in the attempts to solve these problems, from the profound Stukeley to the imaginative Duke, they remain to this day as doubtful as ever."

——— Vol. cviii, 1860, p. 205.—*Stonehenge.*

"It is little wonder that sober-minded people look on the solution as hopeless."

——— Vol. cxxiii, 1868, p. 52.—*Cornish Remains.*

"The holes worked in the upper stones, and the pointed tops of the pillars fitted into them, support the opinion that in Stonehenge we have one of the latest specimens of Celtic architecture."

THE EDINBURGH REVIEW, Vol. cxviii, July 1863.—Art. II, *Druids and Bards.*

P. 58.—"In the instance of one Druidical temple, and that the most illustrious of them all—Stonehenge itself—the tradition of Druidical origin is impaired by the fact that a totally different tradition existed several hundreds of years ago. . . . It was reputed to have been brought over from the flat meadow in Ireland, now used as a race-course at the Curragh of Kildare." "This conclusion is as true as it is humiliating, that the history of so magnificent an effort of human power should be lost in impenetrable darkness." After contemptuous notice of Godfrey Higgins' learned work, *Celtic Druids*, the author dismisses the labours of Sir R. Colt Hoare with three lines ending, "but all this fine classification becomes lost if the geologists have their way, and make out the barrows to be diluvial formations left by the lakes and other waters." The writer refrains from naming these geologists.

J. T. BLIGHT.—*Gentleman's Magazine*, 1868.

Considers stone circles to be the remains of continuous walls surrounding burial-places.

THE REV. J. H. BROOME.—*The Astronomical Register*, No. 81, Sept 1869.

From astronomical reasons concludes that Stonehenge was constructed 977-8 years B.C. "King Efroc was then reigning over Britain", who founded the city of York. He appends a surprising ground plan of Stonehenge restored.

JOHN THURNAM, M.D., F.S.A., ETC.—"On Ancient British Barrows, especially those of Wiltshire and the adjoining Counties." *Archæologia*, vol. xliii, p. 285, Nov. 25, 1869—March 1870.

An important paper on the subject. P. 308.—He concludes "the builders of Stonehenge to have been the Belgæ, or, possibly, a confederation of the whole of those Belgic tribes by whom, at a not very long time before our era, a great part of South Britain was conquered and settled."

JAMES FERGUSSON, D.C.L., F.R.S., ETC.—*Rude Stone Monuments.* 1872. Stonehenge, p. 89.

Concludes that Stonehenge is a cenotaph raised in honour of British princes slain by Hengist. "The true explanation of the mystery seems to be, that the design of Stonehenge may have come from Ireland, the native style of art having been in abeyance in England during the Roman occupation, and that the Blue-stones most probably came from the sister island.

"Why may we not suppose that these were erected in memory of the kings or others who were buried in front of them? Why may not Aurelius and Constantine have been buried in front of the two small pairs at either end of the so-called altar-stone? If this were so, and it appears to me extremely probable that it was, the last remains of the mist that hangs over the uses of this monument would be dispersed."

After ridiculing Stukeley's conjecture that the Cursus was a course for chariot racing, he concludes that it was constructed to commemorate the site of a battle-field; in order to make this appear the more probable he completes the second Cursus, as marking the position of the attacking party. "We know of no battle fought on Salisbury Plain." "This, however, is the merest negative assumption possible."

CHRISTIAN MACLAGAN, 1875.—*The Hill Forts and Stone Circles of Ancient Scotland.* Stonehenge, p. 70.

The stones are presumed to have been enclosed in masonry with a domed roof, the whole structure forming a military defensive work. Ground plan and section and end elevation of the ruin so restored are appended.

W. LONG, M.A., F.S.A., ETC.—*Wiltshire Archæological Mag.*, vol. xvi, 1876, p. 192.

Concludes that the history of Stonehenge must be read by such light as the contents of the barrows afford. The result, of course, would be to throw back the erection of Stonehenge to prehistoric times. The result of ethnological, linguistic, and archæological researches into a higher period might be to favour an idea of a Phœnician or some other external source of influence, of a very early date, having been associated with the erection of megalithic structures of the west of England. Till then the writer is content to consider the Belgæ theory regarding Stonehenge, originated by Mr. Walner, and so ably supported by Dr. Guest, as by far the most rational which has yet been propounded. He gives a list of the early authors on Stonehenge, and says :—

"It thus appears that there have been many and extensive diggings within the circles and the vallum, and that the result has been inconsiderable, beyond the throwing down of one of the trilithons."

He expresses his belief "that the only result of further excavation would be the determination of the non-sepulchral character of the work. But even the discovery of human remains within the circles would no more prove that Stonehenge was constructed to be a burial-place than the finding of bishops' and other people's bodies in cathedrals would be decisive that these buildings had not been erected with the primary object of promoting the worship and service of Almighty God."

NEVIL STORY MASKELYNE, M.A., F.R.S.—"Stonehenge: the Petrology of its Stones." *Wilts Arch. Mag.*, Oct. 1877, p. 147.

An important paper on the subject.

Specimens of the stones are in the museum at Salisbury for the use of any future petrologist; and it is suggested that a search for chips might lead to a more complete acquaintance with the nature of the stones

employed at Stonehenge, and aid in a future solution of the problem of their sources (this obscurity alludes to the Blue-stones), which he concludes are of foreign origin.

*Apropos* of this suggestion see article by Mr. W. Cunnington, *Wilts Arch. Mag.*, 1883, here mentioned under "The Chips", p. 16.

DR. PHENÉ, F.S.A., F.R.G.S.—*Wiltshire Archæological Mag.*, vol. xix-xx, p. 235, 1880-82. "Existing Analogues of Stonehenge and Avebury, researches in the Mediterranean."

Dr. Phené says: "There is evidence enough to show, both in the mortise and tenon construction, and in the vastness of the stones (although those of Stonehenge are smaller than the monoliths in Brittany), that the artificers, or, at least, designers, of even the later parts may have been of Phœnician origin, or at least of their date, the monuments of the Baleares being Pelasgic of the oldest type. The Pelasgi were a people with whom the Phœnicians were in communication, and all the features of Stonehenge and Avebury have analogues in the islands between the African continent and Europe. In any case, that Stonehenge is not a purely British structure is clear." "Having repeatedly examined the route of the ancient traffic in tin through Gaul, I feel clear in stating that they (triliths) seem to follow a line from Africa, where several trilithons exist, through Gaul, and then by the Atlantic shore and islands to Britain, a trilithon being found on the coast in Brittany at St. Nazaire, and one in the Ile d'Ouessant."

W. BOYD DAWKINS, M.A., F.R.S., F.G.S.—*Early Man in Britain.* 1880.

Gives restored ground plans by Stevens, Brown, and Long. "The date of both these temples (Avebury and Stonehenge) is indicated by the surrounding tombs."

"Even if we allow that they (stone circles) originally were tombs in every case, it does not follow that they have not also been temples, for the religious sentiment has, in all ages and in all places, tended to centre in tombs which ultimately have become places of worship." "Probably the idea of both large and small circles sprang originally from the stones placed round the base of the circular hut, which was the usual habitation in the prehistoric period," p. 375, *et seq.*

"The foreign stones, composing the inner circle and the inner apse, some of which are igneous, may have been derived from Wales, Cornwall, or from the Channel Islands. It is obvious that they would not have been

transported to Salisbury Plain excepting under the influence of some strong religious feeling; and a peculiar value must have been attached to the material, since the stone of the neighbourhood would have satisfied all the purposes of a monument."

PROF. W. M. FLINDERS PETRIE.—*Stonehenge, Plans, Descriptions, and Theories.* 1880.

In this work he supplied students for the first time with a thoroughly reliable ground plan on a convenient scale.

His theories for ascertaining the unit of measure used in the construction of ancient buildings, leads him to conclude that the different parts of Stonehenge have been erected at different epochs, in the following order. (1) Earth-Circle. (2) Avenue. (3) Sarson circle, trilithons, mounds 92 and 94, and outlying stones, more or less contemporaneous. (4) Blue-stones. He dates the trilithons and Sun-stone by his theory and computations, grounded on sun-rise observation, to 730 A.D. ± 200 years; and seems inclined to believe Geoffrey of Monmouth's account, that Stonehenge was erected in memory of British chieftains massacred by the Saxons. "Another allegation against the historical character of the narrative is the interference of Merlin. But though his life (or their lives) was embellished elsewhere, in this incident there is nothing of which a modern contractor need be ashamed. He is only said to have used 'the engines that were necessary' to remove the stones from Ireland to the ships, and they were brought over in the most matter-of-fact manner. Giraldus similarly says that by aid of his engines he took down the stones with incredible ease, to bring them over for the erection of Stonehenge. In short, in these accounts there is no discrepancy, and nothing to tax our credulity; and if other evidences should indicate that, by a very natural aggrandisement, the whole was ascribed to the authors of a portion, it is a fault that has often occurred in later writers, and which modifies, but not destroys, this testimony."

The massacre in question is said to have occurred in the middle of the fifth century, A.D.

THE REV. W. C. LUKIS, F.S.A.—*Proceedings, Society of Antiquaries of London*, 1881, p. 145, *et seq.* "Report on the Prehistoric Monuments of Stonehenge and Avebury."

Upon presentation of a plan of Stonehenge, executed for the Society, points out numerous details which indicate "the extreme care with which the

work was executed, and the intention of the builders to render the structure complete and shapely." "If we contrast it with other prehistoric buildings, with those, *e.g.*, which are composed of uprights supporting rude traverse blocks for ceilings, such as the sepulchral chambers and cists, we are struck with the calculating ingenuity which has produced such a work as Stonehenge, to the blind hap-hazard method of procedure adopted in these last."

"The stone called the 'Friar's Heel', which stands in the Avenue, I regard as belonging to a later date than Stonehenge, and having nothing to do with the monument. My opinion is that it was erected here as a sepulchral monolith upon consecrated ground, perhaps long after the purpose for which the circles were designed had been discontinued, and for the following reason. All the Sarsen stones composing the monument, without exception, have been shaped with a tool, whereas no tool has touched the 'Friar's Heel'."

E. T. STEVENS, F.S.A., 1882.—*Jottings on Stonehenge.*

"My own impression is that Stonehenge was a temple." P. 83.

"It is more than probable than Stonehenge was erected by a bronze-using people; but tools of bronze have been practically shown to be less efficient in working stone than tools of flint." P. 99. He presumes that the two holes in Blue-stone 150 are "Elf-pots". Plans and illustrations are appended.

This excellent hand-book gives a brief, but clear, account of the relationship between the primitive tomb and the stone circle.

Treating on this subject, Mr. E. T. Stevens had already published his work, *Flint Chips*, 1870, see p. 413, where the primitive round hut is compared with the circular tomb.

W. CUNNINGTON.—*Wilts Archæological Mag.*, vol. xxi, p. 141, December 1883.

"Stonehenge" note. The fragments.

Besides the chippings (mentioned Chap. I) records the following finds:—

By Mr. H. Cunnington, 1879, just under the turf, within a few yards from the main entrance of Stonehenge, a fragment of a hatchet-shaped stone implement. It is two inches and a half in length, of a dark reddish

colour, and extremely hard. A slice has been cut from it for the microscope, and it is thus shown to be a uralitic diabase rock, distinctly differing from the diabases composing the obelisks of Stonehenge. It is quite unlike any Wiltshire stone, and must have been obtained from a long distance. He mentions, also, two specimens of ancient glass, probably of the Roman or Romano-British period, found within the area.

W. S. BLACKET, 1883.—*Researches into the Lost Histories of America.*

Concludes that "the Apalacian Indians, with their priests and medicine men, must have been the builders of Stonehenge. That grand and marvellous erection, therefore, attests the truthfulness of Plato when he brings into Western Europe a great conquering people from beyond the Pillars of Hercules."

T. A. WISE, M.D., 1884.—*History of Paganism.* Caledonia.

P. 44.—"It was when the Romans had been compelled to evacuate the island, that the people, once more free to resume their venerated religious rites, and full of zeal for the faith of their fathers, would appear to have set about the erection of this monument (Stonehenge)."

P. 45.—"According to this view the inner circle and central oval are to be considered as the sacred part of the temple, while the outer circle and the trilithons served, in the absence of 'similar rows of large oak trees set close together', as screens to the ceremonies performed within the circle. The inner circle and the oval, where they approach one another, were united in two granite trilithons. The latter lies prostrate where it appears to have stood, and the other has been removed, with a number of the smaller stones. These two granite trilithons appear to have separated the sacred part from the sand-stone trilithons."

P. 200.—The Buddhist missionaries from the east "we have so often referred to, took possession of the groves, cells, and high places of the Druids," etc.

Conversions from Buddhism to Christianity afterwards took place, etc.

PROF. JOHN RHYS.—*The Hibbert Lectures*, 1886, p. 194.

In regard to the question, "whose temple Stonehenge was, or whose it chiefly was? After giving it all the attention I can, I have come to the conclusion that we cannot do better than follow the story of Geoffrey,

which makes Stonehenge the work of Merlin Emrys, commanded by another Emrys, which I interpret to mean that the temple belonged to the Celtic Zeus, whose later legendary self we have in Merlin."

PROF. A. T. EVANS, M.A.—"Stonehenge." *Archæological Review*, vol. ii, Sept.-Feb., 1888-1889.

Speaks of Stonehenge as an advanced representative of the sepulchral form of architecture, where the cult or worship of departed ancestors "may have become associated with the worship of the Celtic Zeus, the form under which the divinity was worshipped would have been that of his sacred oak."

He puts the approximate date for construction at about B.C. 200, but assumes that the stones were not set up simultaneously; that the Blue-stones were set up gradually and at intervals of time in honour of ancestors, and that the Blue-stone circle was never completed. In regard to the stones and mounds of the Earth-circle "in this case the mound is evidently regarded as the votive equivalent of the stone."

He presumes "that the outer Earth-circle was the part first formed, and that a central object of the cult existed before the stone circles or the triliths were upreared. But if such a central object must by all analogy be presupposed in the present case, none more suitable can be imagined than the sacred tree." This, then, was "the original holy object within the central triliths of Stonehenge."

He says that the soil about Stonehenge "in primæval times was inevitably overgrown with wood, a circumstance which could not fail to exercise a modifying effect on the force of the prevailing winds. The comparatively populous settlement of the district in early times, of which the barrows supply the abiding record, is itself a clear indication that the physical conditions have changed, and that the spot was formerly less bleak than at present."

C. I. ELTON, F.S.A.—*Origins of English History*. 1890.

Note, p. 142. There are indications at Stonehenge that the people of the Bronze Age were the actual constructors of the temple, on a site which had previously been selected as a burial-ground for the chieftains of the neolithic tribes.

THE RT. HON. SIR JOHN LUBBOCK, BART., M.P., D.C.L., ETC. —*Prehistoric Times*, 1890, fifth edition.

"If, then, we could determine the date of these tumuli, we should be justified, I think, in referring the Great Temple itself to the same period." "Stonehenge, then, may, I think, be regarded as a monument of the Bronze Age, though, apparently, it was not all erected at one time, the inner circle of small unwrought Blue-stones being probably older than the rest." "Both Abury and Stonehenge were, I believe, used as temples." (Pp. 127 and 128.)

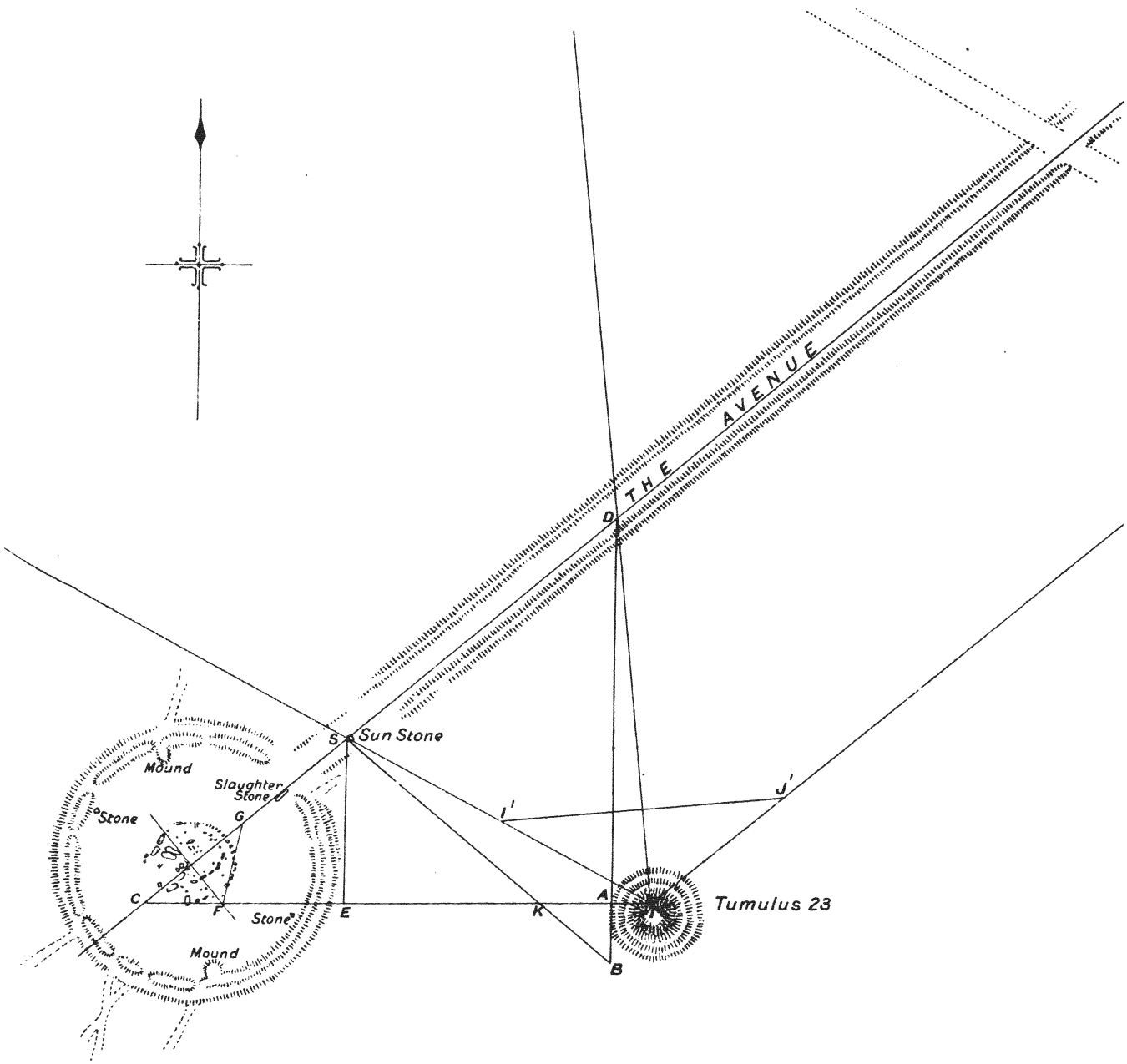
PROF. A. L. LEWIS.—"On the Wiltshire Circles: Stonehenge." *The Journal of the Anthropological Institute of Great Britain and Ireland*, vol. xx, No. 3, p. 283, Feb. 1891.

"What these arrangements can point to except Sun-worship, in some form or other, no one has yet been able to suggest."

In regard "to the relative age of the respective circles at Stonehenge", he says "if there were any difference in their age the Blue-stone circles were the first on the ground, with the 'Friars' Heel' as an outlying stone to the north-east." In regard to the other Sarsen works of the structure, he presumes that these were "added in post Roman times, and, possibly, as stated by old chroniclers, to commemorate the massacre of the Britons by the Saxons." He also suggests that the Blue-stone impost may have stood on two small stones upon the Altar-stone.

# Index.

LONDON: PRINTED AT THE BEDFORD PRESS, 20 AND 21, BEDFORDBURY, W.C.




Scale 1/2500

FEET 100 0 100 200 300 400 500