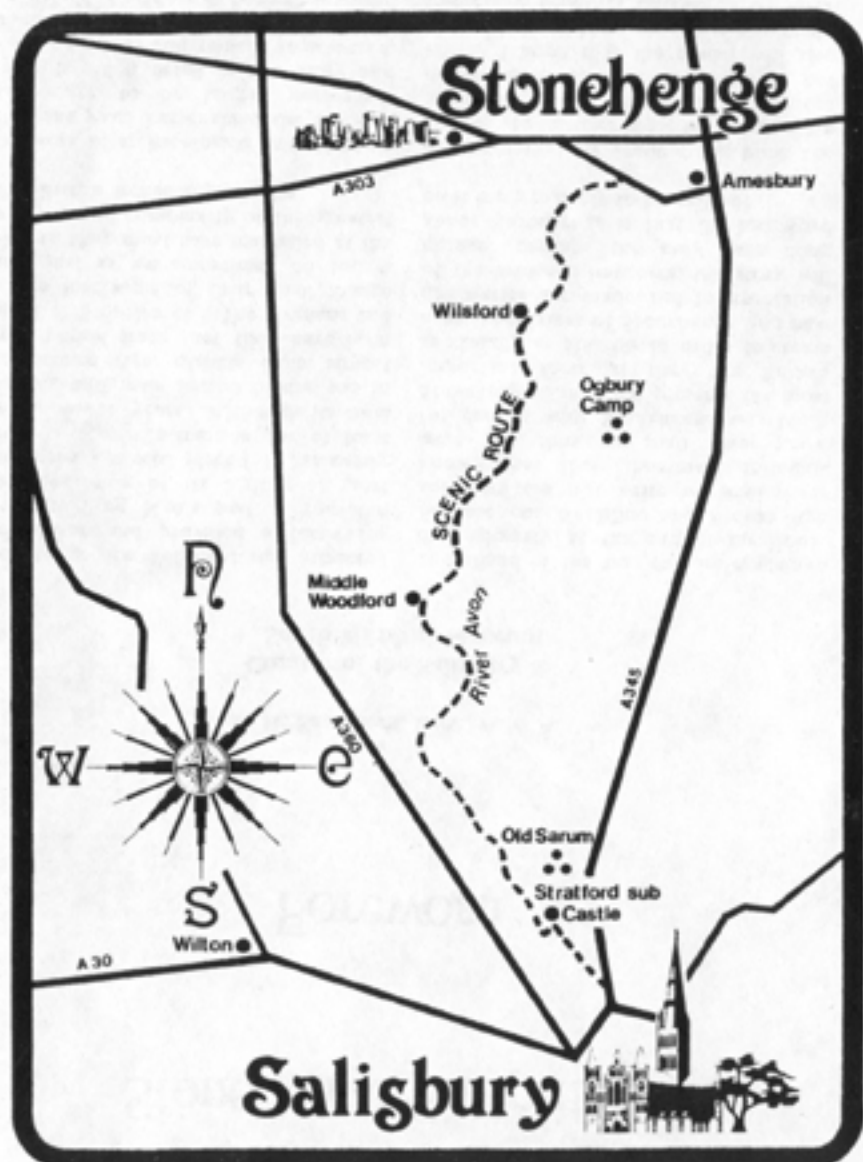


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Stonehenge Simplified

Foreword

by

P. R. Saunders, B.A., A.M.A.

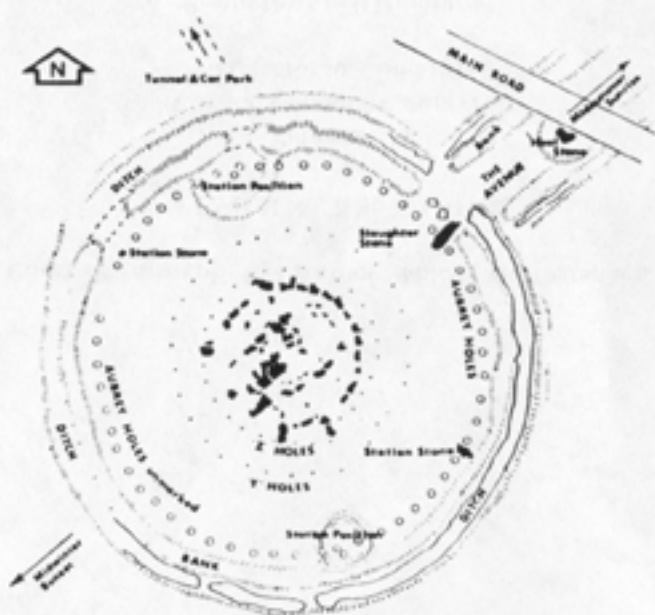
Curator of the Salisbury &
South Wiltshire Museum

Stonehenge has for centuries attracted the visitor and provided a focus for speculation on Man's past. From the very beginning of its history it must have been a special place. It has surely been a tourist attraction for at least two thousand years. Although its final building and main period of use was in the Bronze Age, objects from almost every period since that time have been found at Stonehenge. The Romans and Saxons lost some of their small change there just as we sometimes do today. Like us, they must have marvelled at the antiquity and complexity of this greatest of all British archaeological sites.

The work of archaeologists and scientists in recent years has enabled the story of Stonehenge to be largely unravelled. There is much detail in this story and many questions still remain unanswered. *Stonehenge Simplified* does not dwell on the details, nor does it become involved in controversial arguments: it has been written as a guide for the person who wishes to be told in understandable language when and how Stonehenge was built. Some less familiar words are

underlined in the text and are explained in a glossary at the end of the book. Because our Neolithic and Bronze Age ancestors did not write we shall never know what their innermost thoughts were and thus we shall never know for certain why Stonehenge was built. *Stonehenge Simplified* presents the most important facts as they are known as visually as possible in order to create a balanced view of Stonehenge. As new discoveries are made and interpretation of the evidence improves, the story will change: perhaps the only sure thing about Stonehenge is that the last word on it is never likely to be written!

I believe that by reading this book the visitor to Stonehenge will appreciate more fully what he sees and therefore derive more pleasure from his or her visit. I hope that the reader will also visit Salisbury Museum where the many impressive treasures uncovered by archaeologists at Stonehenge and nearby sites are displayed. No visit to Stonehenge is complete without a visit to the Museum.



HOW TO FIND THE MAIN FEATURES AT STONEHENGE





How it all began

About 5,000 years ago.

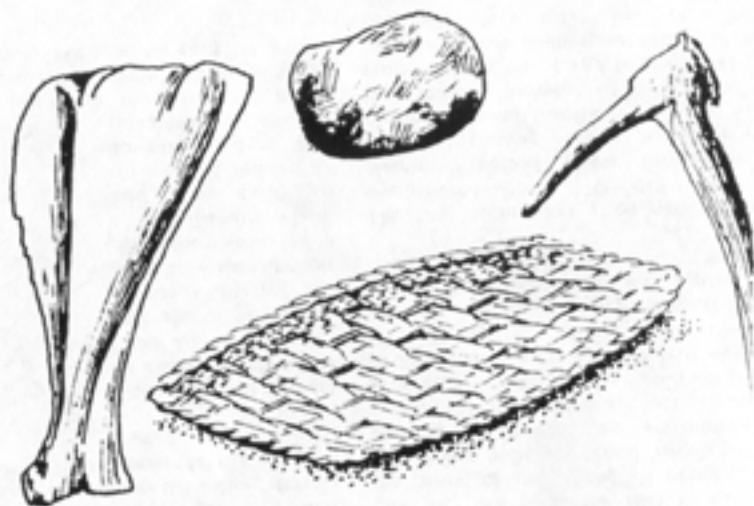
One certain thing about Stonehenge is that we shall never know everything about it. It has puzzled, intrigued, and excited people for hundreds of years. Its builders left no written records. Everything we know about it has to be deduced from the stones as they are today, from excavations, and from comparisons with similar, less well-known, monuments in other places. The most recent excavations were carried out in the 1950's and early 1960's.

From these and earlier investigations, with the aid of modern scientific dating techniques, archaeologists are generally agreed when Stonehenge was built. How it was built is less certain; but the stones themselves, and practical experiments, suggest probable methods. Why it was built is still the most open question of all.

There are many fascinating books which discuss in detail the puzzles set by Stonehenge. This account traces simply and chronologically the building of Stonehenge as it is generally accepted today.

WHERE IT IS

Stonehenge is easy to find. It stands between two main roads, the A303 and A344, where they meet about two miles west of Amesbury. Today you walk through a tunnel which connects the car park and ticket office on one side of the road with the monument on the other. When you reach the stones, you need to use your imagination to picture the countryside as it was when the monument was built. Obviously, no car park, no tunnel, no fences and no artillery school to the north. Probably there were a few trees, but not growing in regular plantations such as you see to



the north west and to the east. If you look past the stones to the south, away from the road, you get the best impression of the gently rolling terrain which may have been familiar to the builders of Stonehenge.

A few inches below the turf that you are standing on lies the chalk, a soft white rock formed under the sea between 125 and 175 million years ago. Chalk hills - the South Downs, the Chilterns, the Marlborough Downs etc. - spread over southern England like the spokes of a wheel whose hub is Salisbury Plain. Chalk is porous and drains easily, so prehistoric people found it easier to travel along the downland ridges than through the heavy clay lands below. It is not surprising then to find major prehistoric monuments like Stonehenge on Salisbury Plain, where early trackways met.

THE FIRST BUILDERS OF STONEHENGE

Although we know that trackways older than Stonehenge crossed Salisbury Plain, and that there are monuments on

the Plain older than Stonehenge, we know very little about the people who built it. We do know that it was the work of one group of people that it was built and rebuilt over a period as long as a thousand to twelve hundred years. This means that not just several generations were involved, but dozens of people with completely different ways of life. Though the people were different, they all shared, or perhaps inherited, a special feeling that Stonehenge was a place of special importance to them.

The first monument at Stonehenge was constructed about 2,700 BC during the Neolithic period [New Stone Age]. At the beginning of this period, people crossed from the Continent, bringing them the knowledge of how to grow crops such as wheat and barley, and to raise animals such as cattle and sheep. Gradually they established themselves where soil and climate permitted; and they needed less to go hunting, fishing and looking for wild foods than the original inhabitants had. The soil above the chalk is fertile but it is easy to work and grass



THE EARLIEST MONUMENT - ABOUT 2700 B.C.

well on it; so the chalk downlands were one of the most favourable areas for people to live in settled farming communities. A great deal has still to be found out about the size of these communities and how many of them there were. We have to assume that throughout the long period of the building of Stonehenge, this society of farming communities must have reached a fairly advanced level. There must have been enough people to do the building, enough surplus food to feed them, enough cattle hides, for example, to make plaited ropes.

THE EARLIEST MONUMENT

To get an idea of the earliest monument at Stonehenge, turn your back on all the stones in the centre and trace the line of the low circular bank which runs right



SCRIBING A CIRCLE USING A ROPE AND STAKE

round the site and through which you have come on the modern path from the tunnel. The bank is a true circle with a diameter of 320 ft. [97.5m], built of the chalk rubble from an irregular ditch outside it. On the north-east side [towards the road] there was an entrance with a causeway across the ditch, narrower than the one that you can see now. In the entrance there were six rows of holes which may have contained stakes, and two larger holes which may have held stones, none of which can now be seen. Beyond the entrance, close to the road, is the Heel Stone, a thirty-five ton *sarsen* stone in its natural state, but which may have been chosen for its blunt pointed top.

On the right hand side of the entrance as you face the Heel Stone, just inside the bank is the first of a series of concrete discs. These mark the Aubrey Holes that get their name from the seventeenth

century *antiquary* John Aubrey who first remarked on them. There are fifty-six of them regularly spaced in a complete circle, but only those that have been excavated are marked. They never contained stones or posts, and were refilled soon after they were dug. Most of those that have been examined contained cremated human bones. Several also contained small chipped flints and long bone pins.

ANTLER PICKS

All the digging for this and later stages would have been done with the simplest tools. Soft soil and chalk was loosened with sharpened and fire-hardened sticks. The harder chalk was broken up with antler picks like the one in the illustration. The sharp *tine* also was hammered into the chalk with the stone, and then the whole pick was used as a lever to prise away a piece of chalk. The broken pieces would be raked together with other antler crowns [the tops of the antlers] and then scraped into baskets with the shoulder-blade bones of oxen. Wooden tools may also have been used, but neither they nor the baskets survive. Several of the bone and antler tools, however, were found in the filling of the ditch, and can be seen in the Museum in Salisbury. Practical trials have been made with similar tools, and they have proved surprisingly effective.



CLEARING LOOSE CHALK FROM THE DITCH



The Henge begins to grow

The simple bank and ditch enclosure remained unchanged for some five hundred years. About 2100 BC a new structure was built, that is thought to have been the work of people of a new culture who had been arriving in Britain from the Continent during the preceding century. There do not seem to have been many of them, but they seem to have made an impact on the life of the Neolithic people whom they found in occupation. They are distinguished by being the first people known in Britain to own gold and copper objects, and by being great travellers in search of these metals. They are known as the Beaker people, from the distinctive type of pottery which is commonly found in their graves.

THE COMING OF THE BLUESTONES

The new structure used large numbers of stones for the first time at Stonehenge. Some of these stones can still be seen because they were reused in the later arrangements of the monument. Nothing, however, can now be seen of this second stage of the monument. The position of the stones when they were first brought to the site is only known from the discovery by excavation of the holes they occupied.

The stones are known as the Bluestones from their blue-grey colour, and they weigh up to seven tons. None of the stones occur naturally around Stonehenge, and their origin has been identified by geologists as the Prescelly Mountain



THE SECOND MONUMENT - ABOUT 2100 B.C.



THE PRESCELLY MOUNTAINS - WHERE THE BLUESTONES CAME FROM

in Pembrokeshire [Dyfed] in South Wales, some 130 miles [209 km] as the crow flies. It is impossible to tell what special importance the stones had for the builders of the second Stonehenge to make them go to the trouble of transporting them from so far away. A possible route, largely using water, has been worked out, and is illustrated in the map. From practical experiments largely carried out by schoolboys, it is suggested that rafts might have been used along the South Wales coast, and dugout canoes lashed together, on the rivers in Avon and Wiltshire.

When they reached Stonehenge, the Bluestones were erected in the centre of

the enclosure in a double circle that was never completed. The side nearest the Heel Stone had extra stones, suggesting an entrance. Soon after they were erected, the Bluestones were taken down again, and presumably stored nearby.

In the diagram are also marked the four 'stations'. These are in the same circle as the Aubrey Holes, two are sarsen stones, and two small circular mounds, which may also have once had stones. Diagonal lines drawn between them intersect at the centre of the circle.

THE AVENUE

The entrance gap in the original bank was widened to the size you can see today.



POSSIBLE ROUTE OF THE BLUESTONES



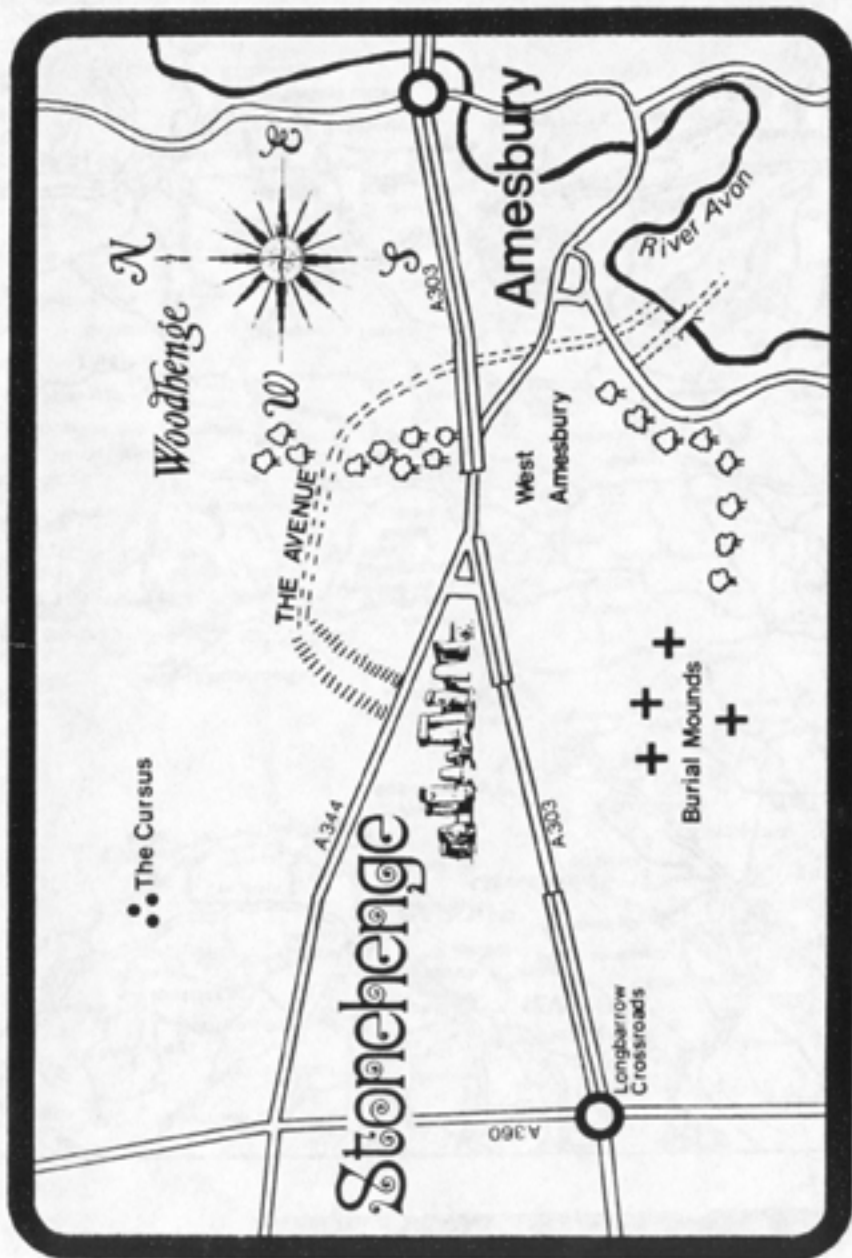
CARRYING A BLUESTONE BY RAFT

From it, parallel banks and ditches were extended away from the monument and down the slope on the other side of the modern road. This is called the Avenue. Beyond the point where you can no longer see the banks, it has been possible to trace the further course of the Avenue from the air as marked in the soil. When it reaches the bottom of the slope, it turns to the right and climbs towards the ridge [in the direction of Amesbury], which it crosses between the two prominent clumps of trees. Beyond the ridge it curves round towards the river Avon at West Amesbury. The map on

page 12 shows the Avenue going right to the river bank, but the last short stretch has not yet been proved. The Avenue may have had a ceremonial purpose; there are avenues at other similar monuments, notably at Avebury, twenty-four miles away to the north. If the Bluestones were brought by water, the river Avon is the nearest, and the route taken by the Avenue is the one with the easiest slopes. Perhaps the Avenue was laid out as a memorial to the route along which these very special stones were hauled?

CARRYING A BLUESTONE ON CANOES





The Engineering Miracle

Some 3,500 years ago.

THE COMING OF THE SARSENS

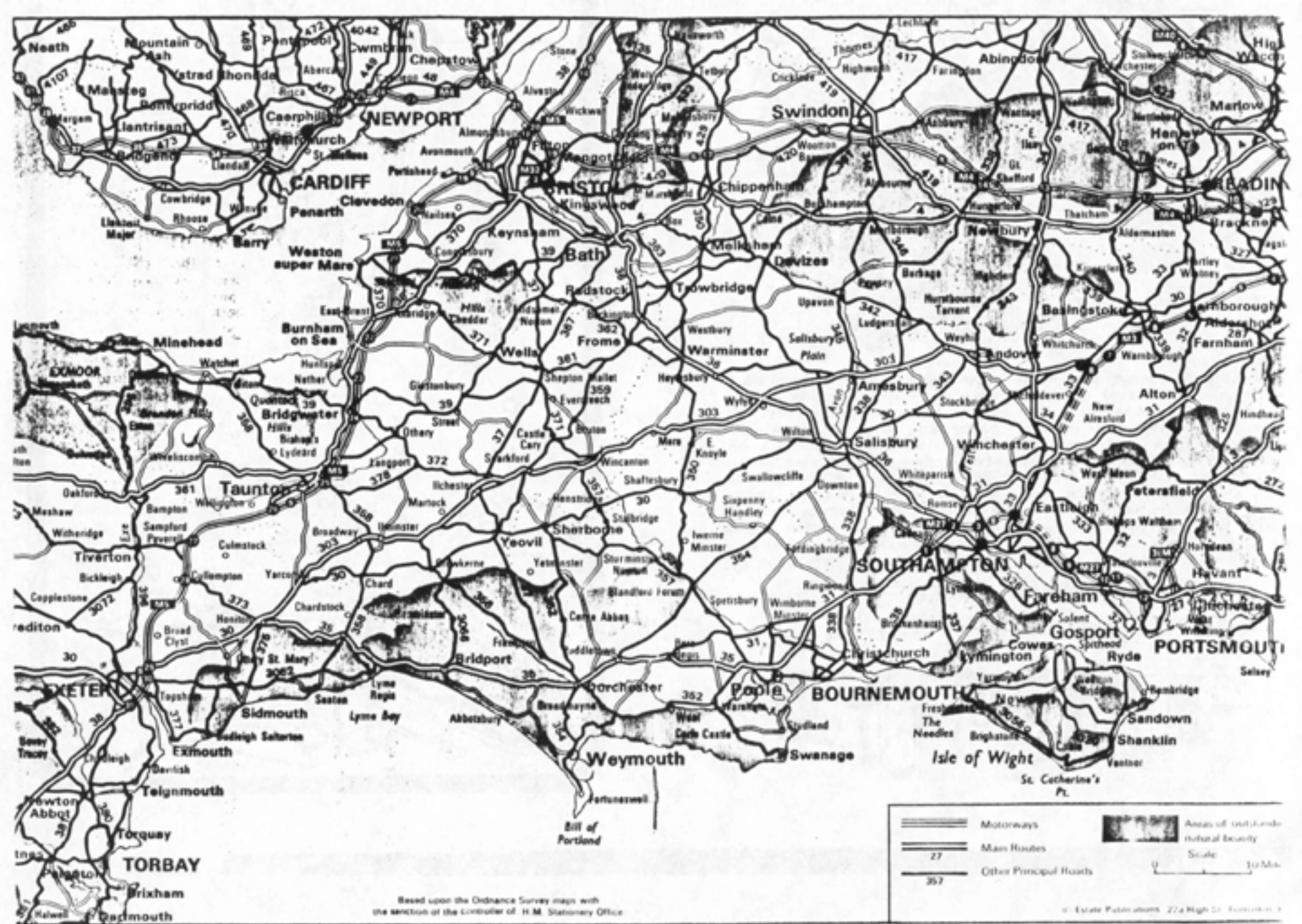
After the Bluestones were taken away, the final stage of Stonehenge was started by again bringing in stones from a distance. This time they were very much bigger; the average weight being twenty-six tons, and the heaviest weighing up to fifty tons. They are called sarsens, a name which may have been derived from 'Saracen' meaning foreign. Sarsen is a very hard form of sandstone which occurs naturally in the form of boulders

on the Marlborough Downs about twenty-five miles away to the north. They can still be seen between Marlborough and Avebury on Overton Down or at Lockeridge Dene.






Because of their bulk, the transport of the sarsen stones to Stonehenge must have involved a great deal of effort and time. The map shows the shortest practicable route, and the illustration is based on theoretical calculations that



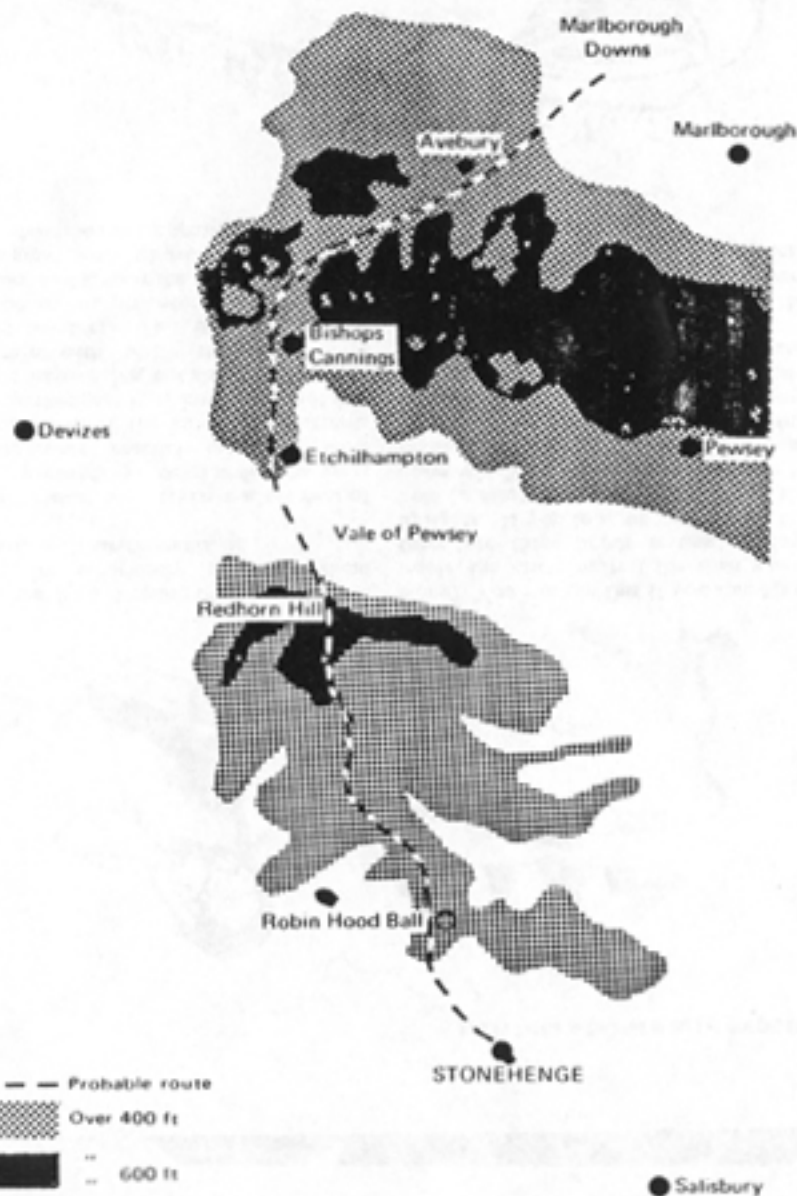
SARSEN STONES ON OVERTON DOWN



Based upon the Ordnance Survey maps with the sanction of the Controller of H.M. Stationery Office

	Motorways		Areas of outstanding natural beauty
	Main Routes		Scale 10 Miles
	Other Principal Roads		

ROUTE OF THE SARSENS



have been made by archaeologists. For example, the heaviest stones weighing about 50 tons would have needed some 1,000 men to haul and steady the sledge, and to man-handle the great timber rollers. Going uphill the number would probably be nearer 1,500. So as to avoid dragging unnecessary weight, the blocks would probably have been roughly shaped where they were found. Although the stone is very hard, it could be split,

either by driving wooden wedges into a natural crack and then exerting pressure by soaking them in water to make them expand; or by creating a crack with fire and water. In this way the stone would be heated by a burning line of fat and twigs, and then suddenly cooled with water, while at the same time having very heavy stones dropped upon it. Further shaping was probably carried out after the stones arrived at Stonehenge, and



TRANSPORTING A SARSEN WITH SLEDGE AND ROLLERS

SPLITTING A SARSEN WITH WEDGES



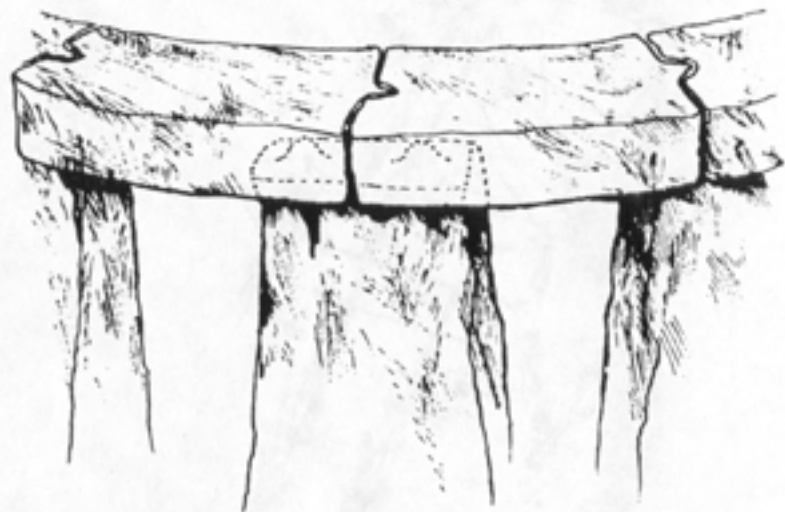
then the final dressing of the stones was done by laboriously pounding them smooth with sarsen mauls.

All this must have taken a great deal of time; probably years. Finally the great stones were erected into the most impressive of all the series of monuments at Stonehenge. It is impressive not just for its massive size, but also for the craftsmanship with which the stones were fitted together. This is what makes it unique among prehistoric monuments in Britain, and gives it the right to be classed as a great work of architecture. It has been described as carpentry carried out in

stone. You can see this if you stand just inside the circle nearest the road where there are three *lintels* resting on four uprights. If you look up you will see the hole [a mortise] on the underside of the lintel which was made to take a knob [a tenon] on the top of the upright; forming what woodworkers call a mortise and tenon joint. Each upright had two tenons fitting into mortises on a pair of lintels, as the dotted lines show on the diagram. Each lintel also fits into the next with a tongue and groove joint. Finally the outer and inner faces of the lintels were curved so that each formed one segment of a complete circle.



SPLITTING A SARSEN WITH FIRE AND WATER



THE SARSEN CIRCLE - LINTELS AND UPRIGHTS

ERECTING THE SARSENS

The first series of diagrams show how it would have been possible to erect the uprights using ropes made of plaited hides, and timber levers, props and shear-legs.



FORMING A TENON

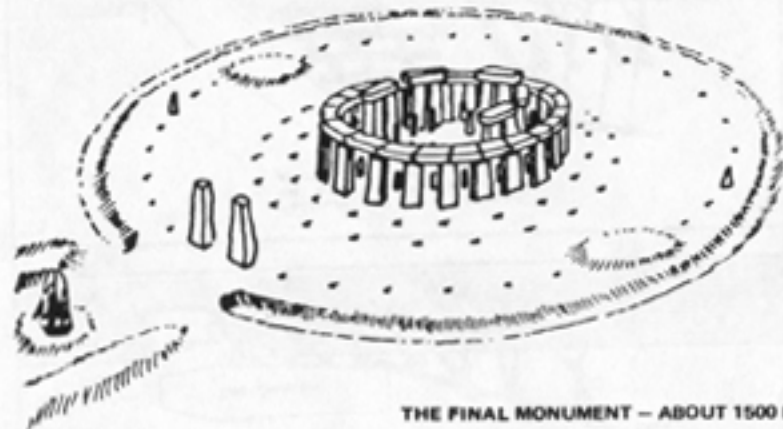
The shape of the holes with one sloping side and stakes opposite to prevent the bottom of the stone crumbling the side when it was overbalanced into the hole has been proved by excavation. One upright, the stones would have had to have been allowed to settle for some time before their tops were worked on to achieve a level bed for the circle of lintels. How the lintels may have been raised on to the tops of the uprights is shown in the second series of diagrams. In all these operations it would have been necessary to find levels, and there is no reason to believe that the builders did not know of such simple aids as the plumb

line, which can be combined with a wooden right angle to find horizontal levels. A wooden or pottery bowl with a flat bottom and a line round the inside of its rim [up to which it is filled with water] can also be used.

THE COMPLETED MONUMENT

What you see in the centre of Stonehenge today are the remains of the final stage of the monument, but the stones were re-arranged several times during a period of some five hundred years starting about 2000 BC. Because many of the original stones are missing, or are only stumps, it is difficult to compare what you see on the ground with reconstructed diagrams of the final form of the monument. There are five main features, one inside the other.

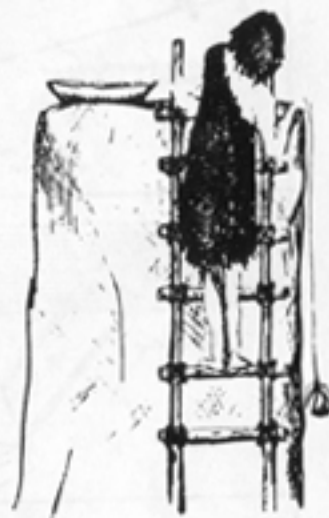
1. Starting from the outside, the 'Y' and 'Z' holes, which were dug but never used to hold stones, and are now completely silted up and barely visible.



THE FINAL MONUMENT — ABOUT 1500 B.C.

2. The Sarsen Circle. Originally a continuous ring of thirty uprights capped by thirty lintels. Seventeen uprights remain in their original positions, most of them on the side nearest the road.
3. A Circle of Bluestones. This was one of the last of the re-arrangements, and used the Bluestones originally brought to

make the second monument. Very little of this circle remains. The best place to identify it is the line of smaller stones nearest the four sarsen uprights with the three continuous lintels on top of them.
4. The Horseshoe of Sarsen Trilithons. 'Trilithon' is a word invented by an eighteenth century antiquary from two



FINDING LEVELS

Greek words meaning 'three stones'. There are five of these trilithons, three of which are complete. They get larger towards the bend of the horseshoe. The largest has only one upright standing, and the tenon on top is easy to see. The other upright is lying in two pieces, and the lintel is nearby on its side, showing two large mortise holes.

5. A Horseshoe of Bluestones in the form of pillars, which, like the Bluestone Circle was one of the final rearrangements. Some of these pillars can be seen in front of and between the two complete sarsen trilithons.

This greatly simplifies what was a complicated period in the history of the monument.

THE ALTAR AND SLAUGHTER STONES

Two of the stones have exciting names, but they got them long before the days of scientific archaeology, and there is no evidence at all to suggest that they were used for the purposes their names imply. The Altar Stone lies underneath the fallen parts of the largest sarsen trilithon. It is a large shaped block of a type of sandstone which is found on the shores of Milford Haven in South Wales, which is on the probable route along which the Bluestones were brought to Stonehenge. The Altar Stone may originally have lain flat, but there is some evidence to suggest that it stood upright. The Slaughter Stone is the large sarsen stone lying flat outside the stone circle near the entrance in the bank. This was almost certainly one of a pair of upright 'gateposts'.

PREHISTORIC CARVINGS

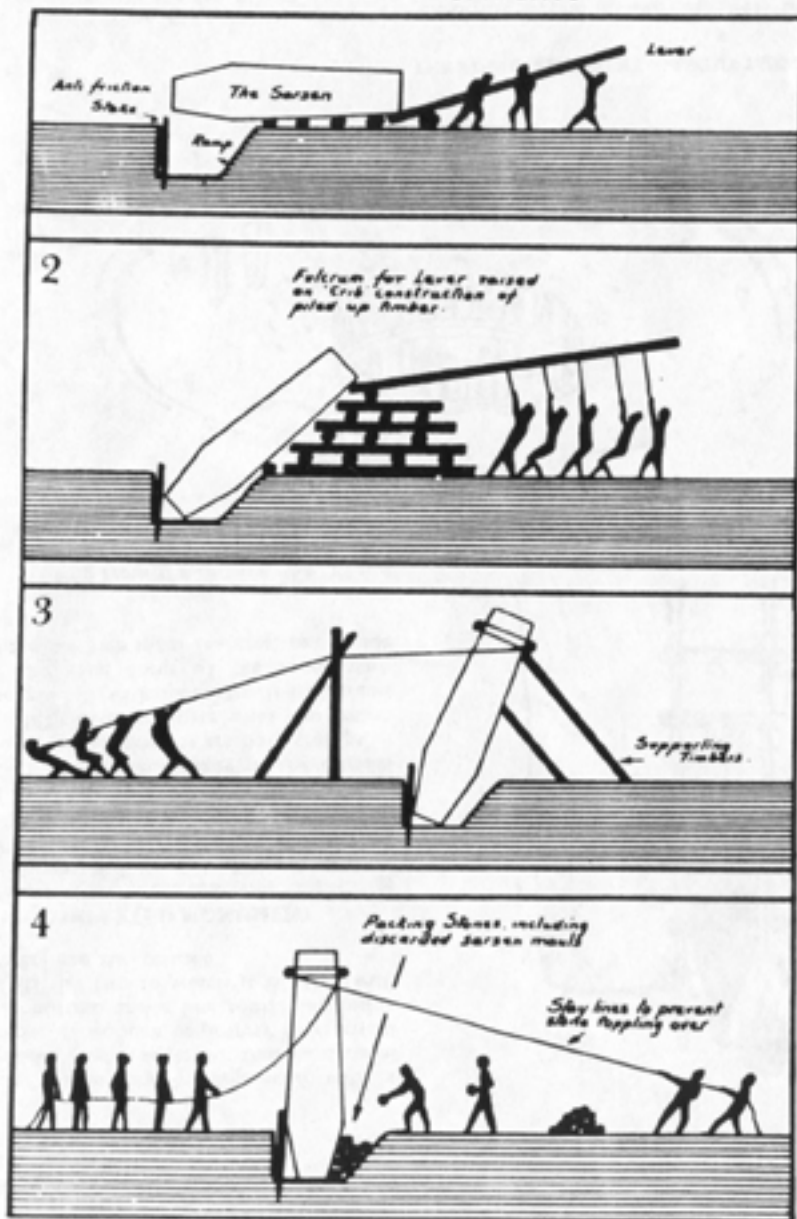
There is not much detail at Stonehenge. Some of the tool marks, etc., from which archaeologists have built up their picture of how the monument was constructed are difficult to see unless they are pointed out to you. Others are on parts of stones that are below ground. The outstanding exception is the carvings on the sarsen stones. They were discovered during the

excavations in the 1950s and are of axes, heads and a hilted dagger. The easiest to see are groups of carvings on two of the stones whose position is marked on the plan at the front of this book. When you see them you may wonder why nobody noticed them earlier. One reason is that so many visitors have run their fingers over them since they were discovered, that they have darkened and become very obvious - please don't! The presence of the axes and daggers could have several meanings. Perhaps they represented gifts for the builders of the monument, or perhaps they were symbols of a cult. The dagger is similar in style to daggers found in the Shaft Graves in Mycenae in Greece, and might suggest a cultural link with that part of the Mediterranean during the early Bronze Age, despite some difficulties in reconciling dates.

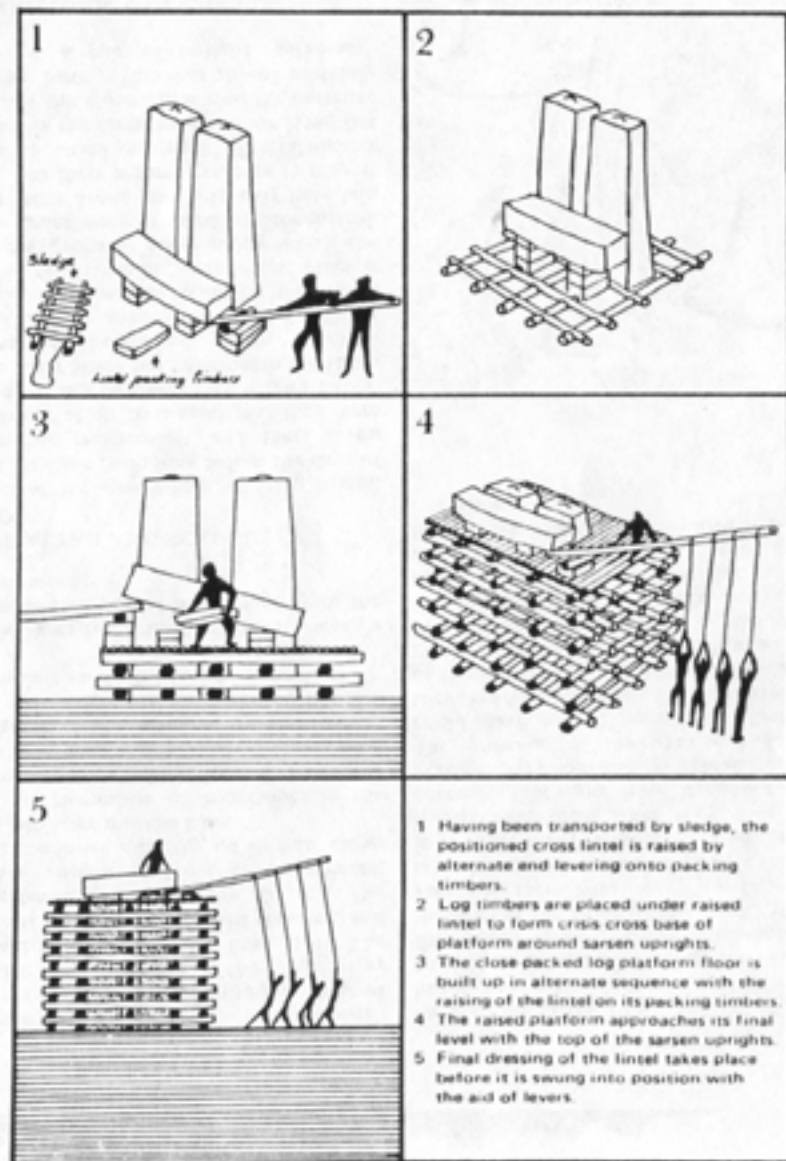


THE PREHISTORIC CARVINGS ON ONE OF THE Sarsen TRILITHONS

ERECTING THE UPRIGHTS



RAISING THE LINTELS



The Mighty Fallen



FALLEN STONES

There are many other carvings on almost every stone, but these are the work of people from about the 17th century onwards who could not resist the temptation to leave their name behind. These *graffiti* are only one reminder of the enormous number of people who have visited Stonehenge down the ages. Some didn't just carve their names. In the last century it was known for visitors to hire a hammer in Amesbury and chip off their own souvenirs! Deliberate destruction of the monument itself may have taken place during the Roman and the mediaeval periods, but there is no archaeological or documentary evidence to support this. With an average depth of between three and five feet in the ground, the stones have a fair degree of stability, but some at any rate are known to have fallen from natural causes. A notable example is the now complete trilithon on the side nearest the visitors' entrance, which, on the 3rd January 1797, after a sudden thaw, 'fell with a very sensible concussion, or jarring of the ground'. An interesting pair of eye-witnesses' 'before and after' water colours can be seen in Salisbury Museum. This trilithon, and a few other stones, were re-erected in 1958; but this time a crane supplied the muscle. There are differences of opinion about how much of this sort of restoration should be done. Stonehenge is now in the care of the Department of the Environment, whose general policy is to examine, record, conserve and protect, but not to re-build.



THE FALLEN TRILITHON BEFORE AND AFTER RESTORATION IN 1958

Why did they do it?

The question that people most frequently ask about Stonehenge is 'What was it all for?' It is quite impossible in a brief account such as this even to list the answers that have been put forward by literally hundreds of writers.

LEGENDS AND TEMPLES

At first people explained it through legends and magic. That dancers had been turned to stone there. That the devil had built it, dropping the odd stone here and there on the way. That it was a monument to British heroes killed in the battle against the Danes. That the stones had been brought over the sea from Ireland and magically put together by Merlin. This last legend persisted a

staying at Wilton House, was taken sight seeing by his host, the Earl of Pembroke and afterwards he commissioned his Surveyor of Works, the architect, Inigo Jones, to examine the ruins and tell him what they were. The answer was quite definite - a Roman temple in the Tuscan style dedicated to the god Coelus. From this time on people began to draw the stones as they thought they were when they were first put up; unlike Inigo Jones', these restorations differed according to what they thought the purpose of the monument had been. Even artists and engravers who came just to record the stones as they were, made pictures which show clearest how they felt about them - making them look



long time, and is interesting now that we know how the Bluestones probably did get to Stonehenge. Later on people tended to see it as a temple, and as their knowledge of the ancient world increased they tended to fit what they had learned about ancient religions into what they imagined Stonehenge had been designed for. For example, King James I, when

AN 18th CENTURY VIEW OF STONEHENGE rougher, taller, or more frightening than they are.

DRUIDS

From the 17th century one idea got particularly firmly attached to Stonehenge. This was that it had been built by the Druids as a temple and that human

sacrifices had been made there. It was from these ideas that the Slaughter and Altar Stones got their names. At the

were then the earliest known inhabitants of Britain. They were a Celtic priesthood who could not have arrived in Britain before 500 BC at the earliest and we now know that building had finished at least a thousand years before. But the association with Stonehenge of such wholly imaginary figures as in the illustration, which was taken from an early 19th century *aquatint*, has persisted almost to the present day. And perhaps some people are still confused when they see newspaper pictures of members of the modern Order of Druids performing their ceremonies at Stonehenge on midsummer morning.

SUN, MOON AND STONEHENGE

But midsummer morning has always been important to Stonehenge. Long before the days of scientific archaeology, it was realised that the entrance points towards the place on the horizon where the sun rises on midsummer day. Now it rises almost over the top of the Heel Stone, although when the stone was erected, the sun would have risen slightly further to the west. So people have seen

this as a simple form of calendar to find the day when the sun was at its highest; and also the principal feature of a temple designed for sun worship. You could equally well have been meant to look the other way at the sun setting on the shortest day in the winter between the gap in the largest trilithon.

It is possible, however, to draw lines through many other parts of the monument, from different stages of its construction, and find that the lines will coincide with where the sun and the moon rise or set at different seasons of the year. The parts of the monument that have been used in these calculations are the rows of post holes in the entrance causeway of the bank, the Heel Stone, the four 'station' positions the fifty-six Aubrey Holes, and the uprights of the sarsen circle and horseshoe. It has also been argued that it would have been possible to predict eclipses of the sun and of the moon and that the Aubrey Holes could have been used as a kind of calculator.

But the fact that it is possible to show that these lines can be drawn, cannot be used to prove that Stonehenge must have been designed for a purpose that made us use of them. If we know that we had all the possible evidence, we might be more prepared to judge any particular theory. But we know that there is more evidence to find - for instance, when the present car park was made a few years ago, three

enormous post holes were discovered - and we know that some evidence is probably lost for ever. So the question 'what is it for?' remains an open one. All we can say for now is that Stonehenge may well have at first been built for a practical purpose such as observing the movements of the sun and moon, and that as time went on, and the structures became more impressive, its purpose became symbolic and religious. Whether the astronomy and the religion were interconnected, we cannot tell.

HOW TO FIND OUT MORE

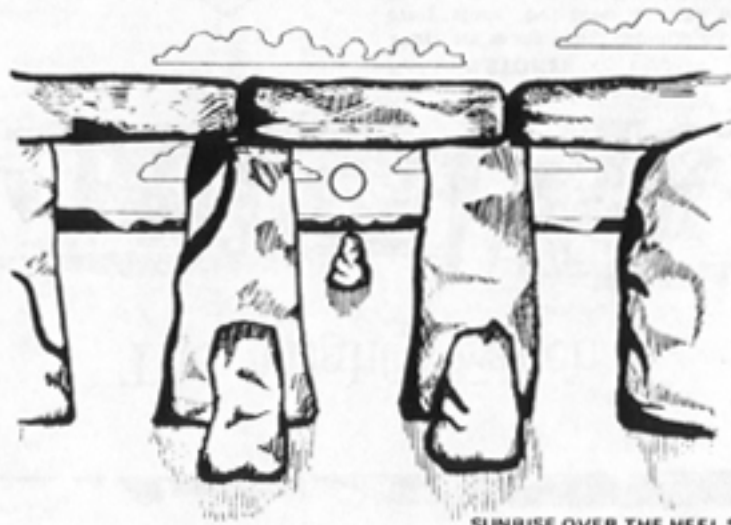
In the Salisbury and South Wiltshire Museum in Salisbury you will find a room which has on display the tools, pottery, bone pins, mace head and other things found at Stonehenge during excavations. There are also old pictures of the monument, diagrams, and models of the stages of construction. On sale is a good selection of Stonehenge guidebooks.

Not far from Stonehenge there are two other circular monuments. Woodhenge, consists of a series of concentric circles of holes which once contained posts and are now marked by concrete stumps. It might have been a Stonehenge like monument in wood, or more likely, a series of large roofed buildings for ceremonial purposes. Nearby is Durrington Walls, a much larger monument whose bank can just be seen on either side of the A345 a mile north of the Amesbury by pass roundabout.

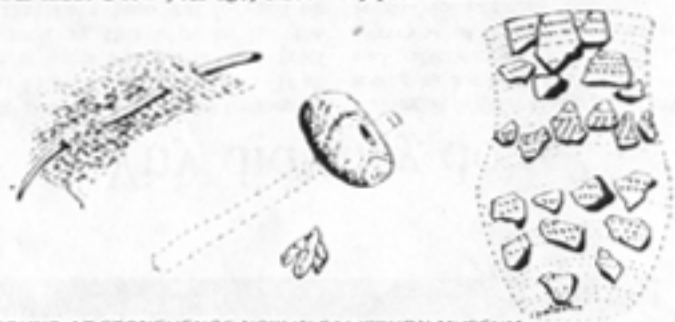


A 19th CENTURY VIEW OF A DRUID

time this was a reasonable notion since the Druids had been described by classical writers such as Tacitus and Pliny, and



SUNRISE OVER THE HEEL STONE



OBJECTS FOUND AT STONEHENGE NOW IN SALISBURY MUSEUM

Useful Information

MUSEUMS

Avebury Museum, Avebury 250 - for great circular monuments, Silbury Hill, etc. Devizes Museum, 41 Long Street, Devizes 2765 - for pre-history and natural history of the whole area.

Salisbury and South Wilts Museum, Salisbury - see advertisement.

TOURIST INFORMATION CENTRES

Amesbury - Redworth House, Amesbury 23255.

Salisbury - 10 Endless Street, Salisbury [0722] 4956

PUBLIC TRANSPORT

See Hants and Dorset Advertisement.

CONSERVATION

The Council for the protection of Rural England-Wiltshire Branch:

Secretary Mrs C Quarm, 'Wyndhams', St Josephs Place, Devizes, Wiltshire. The Department of the Environment, Season tickets, valid for one year, can be bought at Stonehenge which will admit you to all the historic monuments in the care of the Department of the Environment.

The National Trust -

The National Trust owns and preserves the character of the land surrounding Stonehenge and its members are admitted free to the monument on production of their membership cards. For details

of membership and of the other properties owned by the Trust: Regional Information Officer, Wessex Region, Stourton, Warminster, Wiltshire. Tel: Bourton [Dorset] 560.

YOUTH HOSTEL

Salisbury - Milford Hill House, Salisbury [0722] 27572



GLOSSARY

Antiquary A student of ancient relics.

Aquatint A form of engraving on copper.

Bluestones See page 9.

Graffiti Drawings or writings scratched on walls and stones.

Henge a monument, consisting of a circular bank and ditch which sometimes contains arrangements of stones inside it.

Lintel A horizontal timber or stone above a door or a window - at Stonehenge the horizontal stones capping the uprights of the Sarsen Circle and trilithons


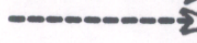

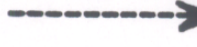
Maul A hammer - at Stonehenge, sarsen boulders used to smooth the sarsen stones.

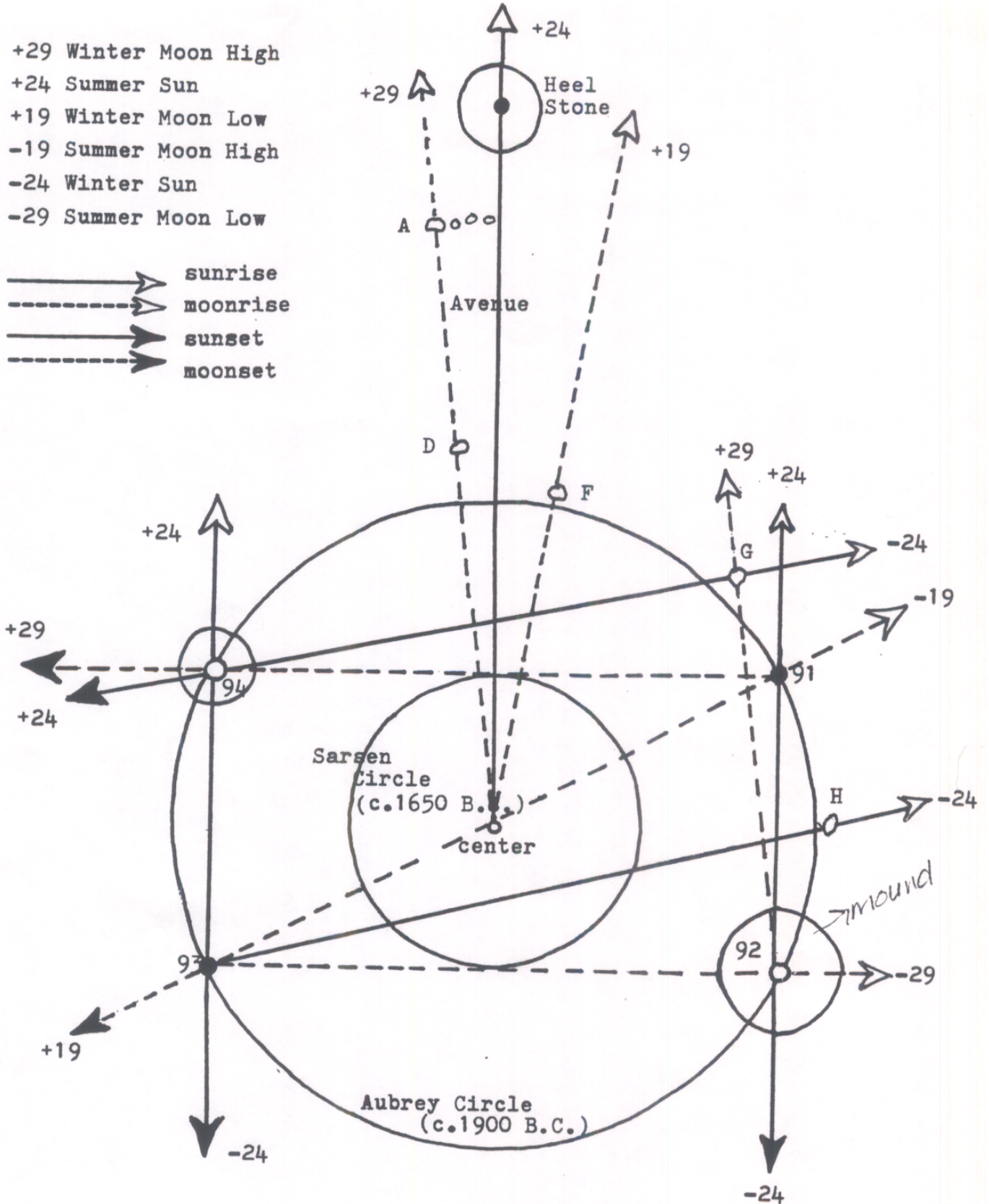
Sarsen See page 8

Tine A point or prong as on an antler or a fork.

Trilithon See page 22

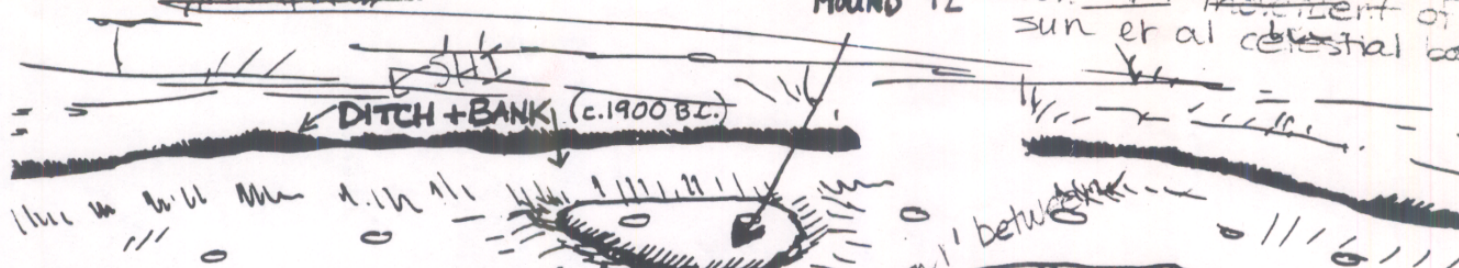
- +29 Winter Moon High
- +24 Summer Sun
- +19 Winter Moon Low
- 19 Summer Moon High
- 24 Winter Sun
- 29 Summer Moon Low

-  sunrise
-  moonrise
-  sunset
-  moonset

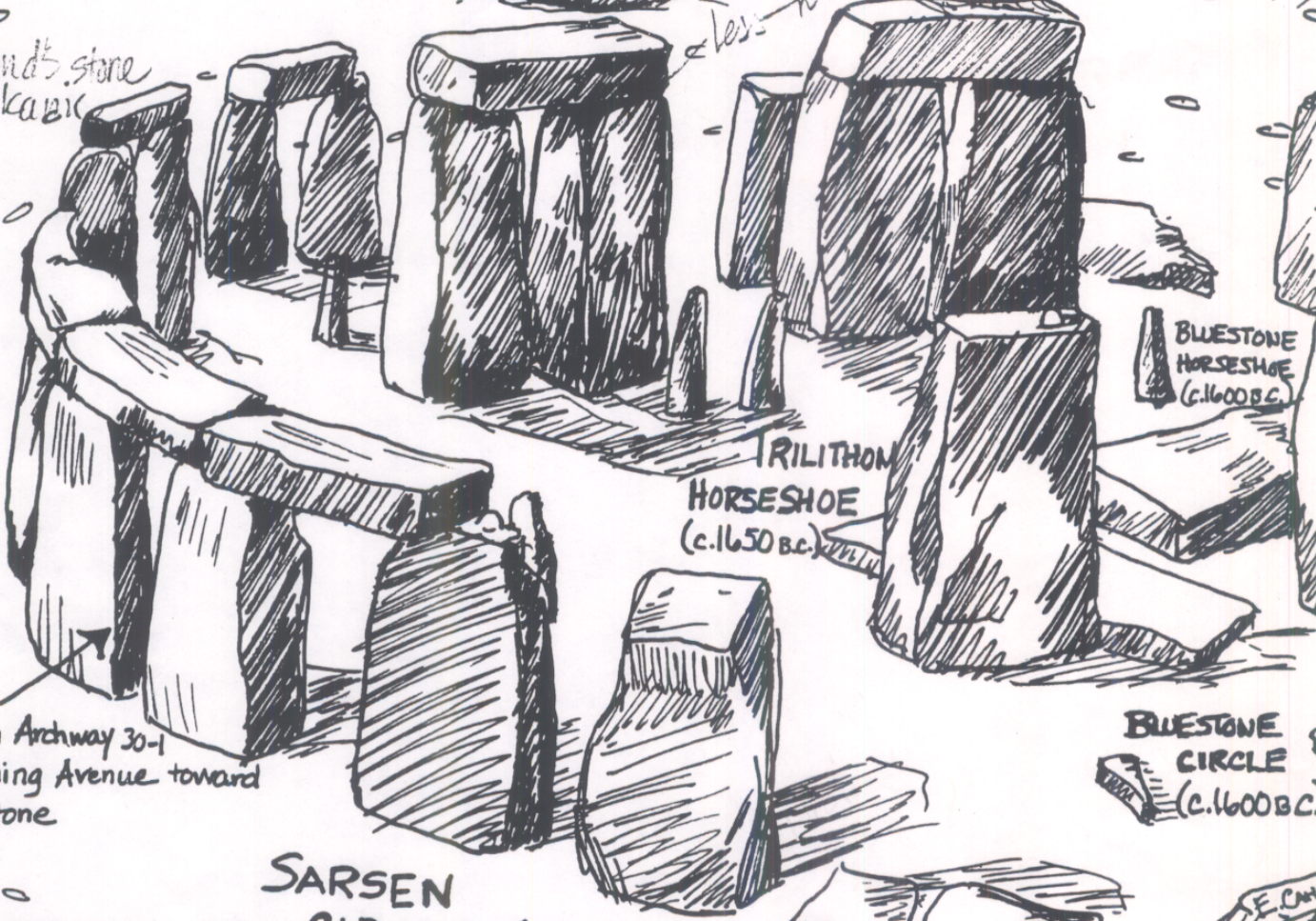


Astronomical Alignments for Stonehenge I-1900B.C.

- astronomical computer - used to
 MOUND 92 monolith alignment of
 sun et al celestial bo



Wales's stone
 - volcanic



Sarsen Archway 30-1
 Beginning Avenue toward
 Heelstone

BLUESTONE
 HORSESHOE
 (c.1600 B.C.)

TRILITHON
 HORSESHOE
 (c.1650 B.C.)

BLUESTONE
 CIRCLE
 (c.1600 B.C.)

SARSEN
 CIRCLE (c.1650 B.C.)

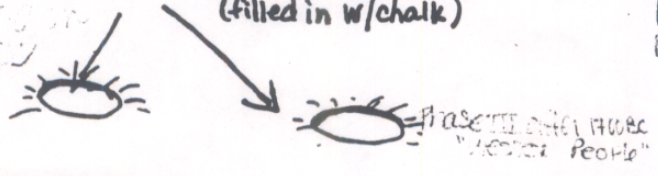
80 in ±
 30-50 tons each

Bluestones were transported
 from Wales c.1750 B.C.
 Original formation was taken
 down and reassembled later by
 Wessex people in 1600 B.C.

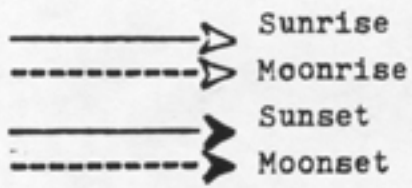
29 (15' outside Sarsens)
 Z HOLES
 (HIDDEN) (1650 B.C.)

30 (39' outside Sarsens)
 Y HOLES
 (HIDDEN) (c.1650 B.C.)

stones rolled down river on rollers (log)
 by raft on river
 down to a wharf
 AUBREY HOLES (c.1900 B.C.)
 (filled in w/chalk)



Phase I 1900 B.C. in central part of site
 Phase II 1750 B.C. "Beaker people" (Wessex)
 Bluestones - circular arrangement
 from Wales - 3 miles



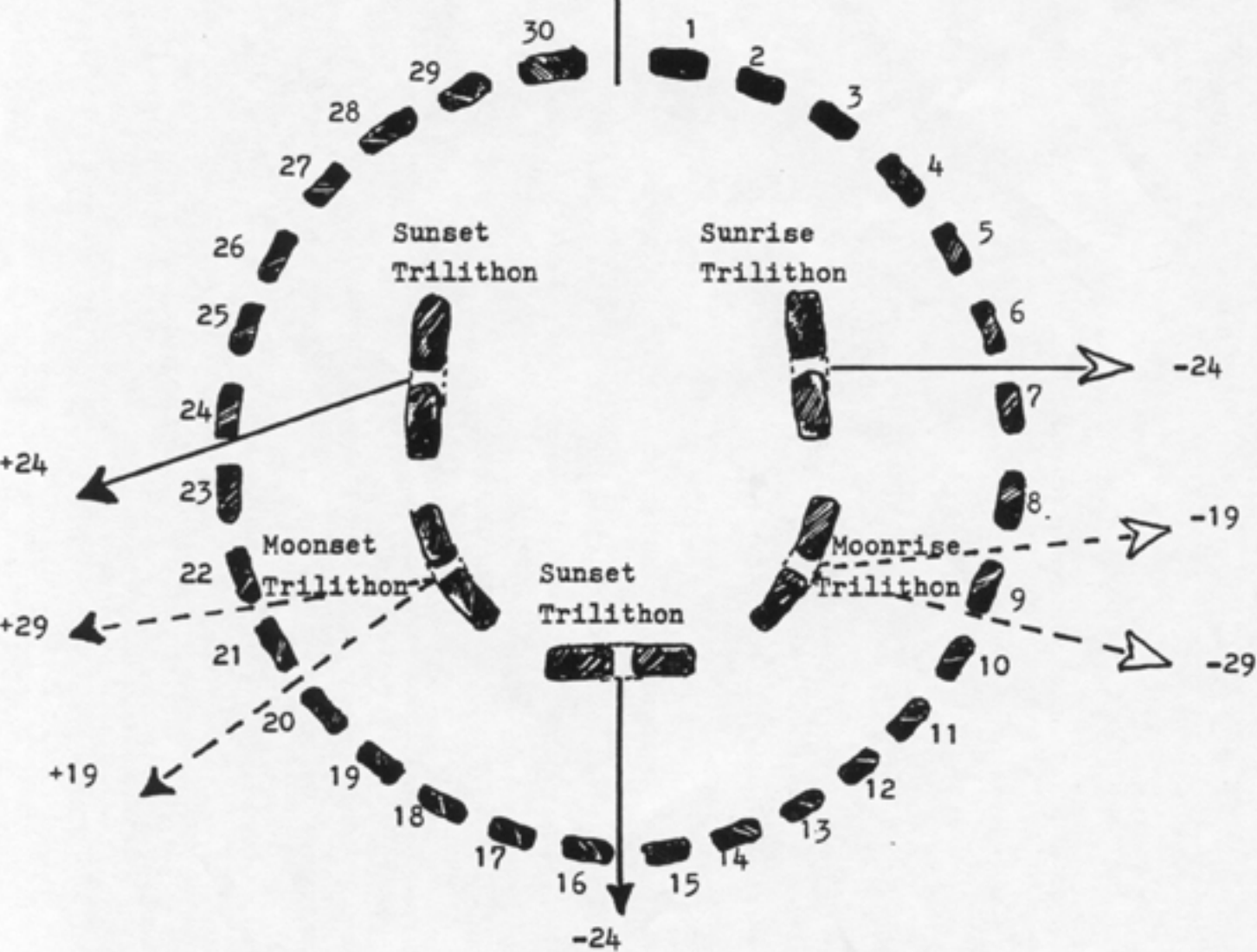
- +29 Winter Moon High
- +24 Summer Sun
- +19 Winter Moon Low
- 19 Summer Moon High
- 24 Winter Sun
- 29 Summer Moon Low



+24



To
Heelstone



Astronomical Alignments for Stonehenge III

Trilithon Horseshoe and
Sarsen Circle