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1921.

628TH ORDINARY GENERAL MEETING.

HELD IN COMMITTEE ROOM B, THE CENTRAL HALL,
WESTMINSTER, S.W., ON MONDAY, MARCH 21st, 1921,
AT 4.30 P.M.

Lieut.-Colonel HENRY SMITH, C.I.E., I.M.S., IN THE CHAIR.

The Minutes of the previous meeting were read, confirmed and signed.

The HON. SECRETARY announced that the Rev. Chancellor Lias' paper having unavoidably fallen through, Mr. E. Walter Maunder, F.R.A.S., of the Greenwich Observatory, had kindly consented to read a paper on "Joshua's Long Day." He also announced the following elections:— As a Member, Mrs. A. E. Piesse; and as an Associate, the Rev. W. E. W. Wycliffe-Jones.

The CHAIRMAN then called on Mr. Maunder to read his paper, which was illustrated by lantern slides.

“*JOSHUA'S LONG DAY*” (JOSHUA, CHAPTER X). By
E. WALTER MAUNDER, F.R.A.S., late Superintendent of the
Solar Department, Royal Observatory, Greenwich.

THE tenth chapter of the Book of Joshua purports to be history, and it is from this history that the sceptic has drawn what he considers to be his most effective weapon against the truth of the Scripture narrative, and the actuality of Scripture miracles. It is therefore worth while to read the chapter with care and attention, and to ascertain what it tells us and what inferences we may naturally and legitimately deduce from it.

This chapter professes to give an account of the conquest of Southern Palestine by the Israelites. We know that there was a time when the Israelites did not possess that country; we know also that there came a time when the country was manifestly under their rule. This tenth chapter of Joshua claims to give us an account of the beginning of the transition from the one condition of affairs to the other.

It is the only such account available to us, and therefore we cannot check it by means of parallel documents. Now men of science, and astronomers in particular, are taught to respect the written document, for without the written document the science of astronomy would be almost impossible. Sun, moon and stars are beyond our reach. We cannot touch them, or alter them in any way. All that we can do is to watch their changes of place and appearance and put those changes on record. And it frequently happens that those records must be accumulated patiently for long generations of men before their full significance can be apprehended. Let me give but one example. Dr. Crommelin, who gave the Annual Address before this Institute on the 9th of May, 1910 (see *Transactions of the Victoria Institute*, Vol. xlii), computed the movements of Halley's comet for a period of 2500 years and found records of observations at nearly every return: the earliest being in the annals of the Chinese observers 600 years before the Christian era. If the written document cannot be trusted, astronomy at least, whatever might be the case with the other sciences, could never progress.

Now every astronomer knows perfectly well that mistakes are made in the original documents; that where a document is copied, the copy is not always correct; that documents are sometimes purposely altered, or even deliberately falsified; nevertheless, it still holds good that in general the written document has a right to be accepted and in no case is it excusable to alter it, or even to suggest that it should be altered, except upon direct, positive and independent evidence. To alter a record so as to bring it into agreement with some preconceived idea as to what it ought to have contained is, to an astronomer, the unpardonable sin.

But in the case of this particular narrative, we have a testimony beyond that of the written document; a present testimony because it is the geography of the country concerned. It is some 3000 years since the Book of Joshua was written, but the physical features of the country are practically unchanged. The Jordan, the "Descender," still hurls itself downwards through the most marvellous rift in the crust of the earth, and still forms the moat which defends the eastern boundary of the Promised Land. And, west of the Jordan, there still stands the great mountain rampart of the Ridge of Palestine. History and geography are inseparably connected, for indeed geography is statical history, and history, dynamical geography. Thus Belgium has been

the cockpit of Europe for two thousand years, not because the Belgians have been quarrelsome beyond all other people, but because their country affords the natural routes for armies moving between France and Germany. In like manner Palestine has been the battlefield between Asia and Africa for four thousand years, and by his victory at Nablous, General Allenby defended both the Suez Canal and the British Raj in India.

The climate also of the country has undergone no radical change. The valley of the Jordan—the Great Rift just alluded to—is still one of the hottest countries of the world. From time to time in the course of his campaign, General Allenby was compelled to send expeditions into the valley, but he always withdrew his troops immediately that he was able to do so ; he made no attempt to occupy it permanently.

The tenth chapter of Joshua is an account of the opening of the first campaign of the Israelites into Palestine proper, the land of Canaan, the land that had been especially promised to their forefathers. They had already possessed themselves during the life of Moses of the country to the east of the Jordan ; now it was to be the turn of Canaan itself.

Long after the time of Joshua, the Psalmist sang :—

“ When Israel came out of Egypt,
The house of Jacob from a people of strange language,
The sea saw it and fled,
Jordan was driven back.”

The forty years' probation—the wandering in the wilderness—was over. As it began, so it ended. On the tenth day of the first month, the lamb had been chosen for the Paschal Supper in Egypt ; now, forty years later, on the tenth day of the first month, Israel had passed over Jordan dryshod, and the lamb was chosen for the first Passover in the Promised Land.

As you all know, the calendar given by Moses to Israel had a double relation. It was based upon the natural month, and regulated by direct observation of the day of the reappearance of the new moon. It was based upon the natural year, and regulated by the direct observation of the ripening of the fruits of the earth. The heavens therefore gave the indication of the beginning of each month ; the earth gave the indication as to which month was the first month of the year.

The forty years had gone ; they had passed like a watch in the night, and the Psalmist sings of the deliverance which had opened

those forty years, and of the deliverance which closed them—sings of them as if both had occurred on the selfsame day :—

“ What ailed thee, O thou sea, that thou fleddest ?
Thou Jordan, that thou wast driven back ? ”

The Israelites had crossed the Red Sea and the Jordan, and they were encamped in the Promised Land. They had crossed the Jordan at its fullest, for “ Jordan overfloweth all his banks all the time of harvest ” (Josh. iii, 15). “ And the people came out of Jordan on the tenth day of the first month and encamped in Gilgal in the east border of Jericho ” (Josh. iv, 19).

The first stage of the entrance of Israel on its promised possession was devoted, not to military measures, but to spiritual. For Israel was the Chosen People of God : the nation that knew God ; and through all its varied history, all who were best and truest in it recognized continually the presence of God in their midst. On the fourteenth day of the first month, therefore, the people kept the Passover, and during the week that followed they kept the Feast of Unleavened Bread, not with bread made with manna from heaven, which now ceased for ever, but with the old corn of the land.

In our inquiry this evening, we are not concerned with the spiritual aspect of the Passover of Joshua, or of the events which followed in the next few weeks. But they are important to us as giving a measure of the flight of time.

The Passover was held on the fourteenth day of the first month of the Mosaic calendar, and the Feast of Unleavened Bread was held on the fifteenth, and six following days ; then came the siege of Jericho, which was straitly shut up for a full week or more, and, after its destruction, the purely military operations of the conquest began. These two weeks—the week of Unleavened Bread and the week of the siege of Jericho—bring us to the end of the first month, that is of the month Abib. It is not likely that Joshua would be slack in taking up his own specially appointed duty, that of acting—under the Lord his God—as Captain-General of the Host of Israel. His army was encamped on the plain at the bottom of that great Rift—the valley of the Jordan. For the time being, he was there well supplied with food and fairly secured from attack. But the climate was enervating and he would have no wish for the nation to make that their settled residence. Further, he had an important duty to fulfil : the charge had been laid upon him to proceed into the heart of

the land, and to bring the people to a solemn reading of the Law upon the mountains of Ebal and Gerizim. This involved that he had to undertake a military duty : he must force his way up the heights that rose some 3500 feet above him, and win a foothold upon the Great Ridge. We may take it, therefore, that Joshua, after the destruction of Jericho, lost no time in sending out scouts to reconnoitre the road by which he should gain the central plateau.

It must have been, therefore, quite early in the second month that Joshua's scouts returned to him with the report that the fortress which commanded the upper end of the valley of Achor—the ravine which offered the best route for the highlands—was a small town named Ai, and they suggested that quite a small force would be sufficient for its conquest. Obviously this advice would appear to be sound from the military point of view : the ascent up the ravine was very difficult, and the Israelites would have a very poor chance of forcing their way upwards in the face of a resolute resistance unless they could surprise the enemy that held the heights. Ai was only a small city, so that a large army seemed unnecessary, and to be much more likely to be detected in its approach. But the result of the expedition was a disheartening defeat. The 3000 men despatched to seize the pass were detected before they gained the heights, and fell back in confusion and dismay after they had suffered a small loss.

We must not condemn the Israelites as being too fainthearted. What happened was probably this : they were climbing up as quickly as they could in companies or half-companies (" hundreds" or " fifties ") and the first " fifty " or half-company was assailed by stones slung or boulders rolled down upon them from above, and was practically wiped out in a moment. The Israelites could see that each succeeding fifty must share the same fate without being able to retaliate. Now, Orientals in such an extremity are very apt to give up the contest, and the Israelites at Ai followed the ordinary rule.

To Joshua this meant far more than a military defeat : it meant that the Lord had shown that He was wroth with Israel, and had withdrawn His help and guidance from the nation. In deep distress, Joshua prostrated himself before the Lord, Who revealed to him that a trespass had been committed in Israel against His express command respecting the spoil of Jericho. The criminal was detected, tried and executed, and when the

people had been purged from the trespass, another attack was planned against Ai. On this occasion quite different tactics were adopted. A pretended attack was prepared, in which the greater part of the whole available force was employed; but first a large army was despatched by a circuitous route to take up a position on the further side of Ai, or, as the narrative expressly tells us, "to lie in ambush between Bethel and Ai on the west side of Ai." Later Joshua himself, with the elders of Israel and the main army, approached Ai from the north. From this point, however, they could not easily approach the city, for there was a valley between them and Ai. Joshua now sent a second expedition of about 5000 men to establish a connection with his first detachment, and when this operation had been successfully carried out, Joshua led the main army under cover of night into the middle of the ravine on the north side of Ai.

With the return of daylight the King of Ai perceived that an attack was threatened, and at once he offered battle. Joshua, on his part, ordered his men to retreat hurriedly in the direction of the wilderness. The men of Ai, believing that the Israelites were again panic-stricken and that the victory was already gained, pursued the Israelites eagerly, and the whole population, not of Ai alone, but also of Bethel, a town distant from Ai some $1\frac{1}{2}$ miles, took part in the pursuit. Then Joshua stretched out the spear which he had in his hand. The 5000 connecting troops passed on the intelligence and the Israelites in ambush rushed upon the empty city and set it on fire. The main army of the Israelites turned on their pursuers, caught them in the open and overwhelmed them, while the ambushes, emerging from the burning town, took them in the rear. Joshua's enveloping tactics were completely successful, even as Allenby's were in the late war.

And now the military operations were again suspended for a time. The nation had to be solemnly dedicated to God, and to take the oath of fidelity to the Law upon the mountains of Ebal and Gerizim. The march thither must have occupied several days, and the date on which that supreme dedication was to take place was without doubt the anniversary of the giving of the Law on Mount Sinai, that is to say, was the Day of Pentecost, seven weeks from the morrow after the Sabbath of the week of Unleavened Bread.

This solemn ceremony ended, the nation of Israel returned to the camp of Gilgal, their way thither being opened, because Ai,

the fortress which had commanded the pass, had been taken and destroyed. But when they had returned to their headquarters, an unexpected event took place : a number of strangers, purporting to be ambassadors from a very distant country, presented themselves and besought a treaty of peace.

During the interval between the destruction of Ai and the return of Joshua to his headquarters at Gilgal, there had been important political movements amongst the inhabitants of the land. A great terror, due no doubt to the direct interposition of God, had seized the Amorites, and the other tribes in the country, and had kept them quiet during the religious ceremonies of the Passover and the journey to and from Ebal and Gerizim. But now the Amorites felt that their time was at hand.

“ And it came to pass, when all the kings which were beyond Jordan, in the hill country, and in the lowland, and on all the shore of the great sea in front of Lebanon, the Hittite, and the Amorite, the Canaanite, the Perizzite, the Hivite and the Jebusite heard thereof ; that they gathered themselves together, to fight with Joshua and with Israel, with one accord. .

“ But when the inhabitants of Gibeon heard what Joshua had done unto Jericho and to Ai, they also did work wilyly, and went and made as if they had been ambassadors, and took old sacks upon their asses, and wineskins, old and rent and bound up ; and old shoes and clouted upon their feet, and old garments upon them ; and all the bread of their provision was dry and was become mouldy. And they went to Joshua at the camp at Gilgal, and said unto him, and to the men of Israel, We are come from a far country : now therefore make ye a covenant with us. And the men of Israel said unto the Hivites, Peradventure ye dwell among us ; and how shall we make a covenant with you.”

(Chapter ix, 1-7, *R.V.*)

You will note that the inhabitants of Gibeon are called Hivites in the seventh verse, whereas just before they have been called “ inhabitants of Gibeon.” Yet, as we read in the first verse, the Hivites were at first members of the great confederacy of the native tribes ; they are included amongst the nations that had gathered themselves together to fight “ with Joshua and with Israel with one accord.”

What had made the change ? I think we may find the answer in the fact that one of the smaller cities of the Hivite republic—Beeroth—was only four miles from Ai, and beyond a doubt the inhabitants of Beeroth had seen the smoke of Ai ascending up to heaven when Ai was burned. That was a kind of argument which even the most stupid of races can understand, and the conduct of the Gibeonites showed that they were not stupid. “They did work wilily and went and made as if they had been ambassadors.”

The fraud succeeded ; the Israelites knew well that they were forbidden to make any treaty with the inhabitants of the land of Canaan ; that they had been all devoted by the word of God to utter destruction. So when—“at the end of three days after they had made a league with them, that they heard that they were their neighbours, and that they dwelt among them ; and the children of Israel journeyed, and came unto their cities on the third day”—it is not remarkable that we read in the next verse, “all the congregation murmured against the princes.” But the covenant had been made, and though the Gibeonites were made bondmen, yet their lives were saved.

The effect of this treaty was instantaneous. Let it be remembered that Gibeon and Jerusalem, the two chief cities of the Hivites and the Amorites respectively, exist at this present day, and are only six miles apart ; that is to say, just about the distance between the Victoria Institute and Greenwich Observatory. It could not have taken long for the news of the treaty to reach Jerusalem, and its significance was understood there at once. Joshua and the Israelites, having secured the Hivites as their allies, had not merely got a foothold in the highlands, but the command of the whole breadth of the Ridge ; the Amorites of southern Palestine were completely cut off from their allies in the north. Adonizedek, King of Jerusalem and head of the Amorite confederacy, saw at once that only one chance remained to him ; namely, to “rush” Gibeon before Joshua could occupy it with his troops. He sent, therefore, to those of his allies who were closest at hand to beg for their immediate help ; namely, to the kings of Hebron, Jarmuth, Lachish and Eglon, that is, the kings of the southern part of the Ridge.

So they “gathered themselves together and went up, they and all their hosts, and encamped before Gibeon and made war against it. And the men of Gibeon sent unto

Joshua, to the camp to Gilgal, saying, Slack not thy hand from thy servants; come up to us quickly, and save us, and help us; for all the kings of the Amorites which dwell in the mountains are gathered together against us."

Joshua responded instantly to the appeal. He and his men set out at nightfall; they went up from Gilgal all the night and were at the gate of Gibeon the following day:—

"And the Lord discomfited them before Israel, and slew them with a great slaughter at Gibeon, and chased them along the way that goeth up to Beth-horon, and smote them to Azekah and unto Makkedah. And it came to pass, as they fled from before Israel, and were in the going down to Beth-horon, that the Lord cast down great stones upon them unto Azekah, and they died; they were more which died with hailstones than they whom the children of Israel slew with the sword."

The victory was gained at Gibeon; what followed was the "discomfiture" of the Amorites—that is to say, their dispersal in headlong rout; they ceased to be an ordered army.

This brings us to a very significant feature of the geographical problem. The Amorites fled by the way of the two Beth-horons. A glance at the map shows what this implies. We should have expected the Amorites, upon their defeat, to have retreated upon Jerusalem, which was their base; or, if this line were closed, to have attempted to move north and seek shelter with the Canaanites in the country afterwards given to Ephraim. Instead, they fled by a difficult and precipitous route which led them away from either, and the language used about their flight is most expressive; they were "chased" along the way going up to Beth-horon the Upper; then "they fled from before Israel" in the precipitous descent to Beth-horon the Lower, and while in the going down a tremendous hailstorm burst upon them—a storm so violent that "they were more who died from the hailstones than they whom the children of Israel slew with the sword." The flight of the Amorites was continued yet further; first to Azekah, at which point the hailstorm appears to have ceased. Here the remnant of the Amorites seem to have turned to the south-west, as if they were hoping to reach Lachish and Eglon, the cities whence many of them had come. On their way hither they reached Makkedah, where the battle ended,

for sunset fell while the Israelites were there. Joshua's troop rushed the city and destroyed it, and Joshua had the five kings of the Amorites, who had been captured a little earlier, hanged upon a tree in the neighbourhood. At the going down of the sun, Joshua commanded that the corpses should be taken down from the tree and buried in a cave.

All these events—the night march of the Israelites from Gilgal, the climb up the mountains, 3400 feet in height, and the march across the Ridge to Gibeon, the battle at Gibeon, the pursuit of the Amorites from Gibeon through the Beth-horons to Azekah and to Makkedah, not far short of 30 miles in length, the storming of Makkedah, the execution and burial of the kings—all took place between one sunset and the next, a period of twenty-four hours.

Where was Joshua standing, and what was the hour of the day in that great moment when he said in the sight of Israel :

“ Sun, stand thou still upon Gibeon ;

“ And thou, Moon, in the valley of Aijalon ” ?

The expression attributed in the text to Joshua is a striking one. The sun is associated with Gibeon, the moon with the valley of Aijalon ; two places on the earth are thus severally connected with the two great lights of heaven. What could there have been in the surrounding circumstances to lead Joshua to associate the sun at that particular moment with Gibeon and the moon with the valley of Aijalon ? Why did he so pair them off together ?

Usually we see the sun and moon as placed above us in the heavens too high for us to connect them in our thought with any fixed object on our earth. But if they are quite low down in the sky—that is to say if either of them has just risen or is just about to set so that they are almost hidden behind some earthly object—such as a hilltop, a grove of trees, or some tower—then we cannot fail to associate them with the terrestrial object to which they appear to be so close. If Joshua, looking toward Gibeon, saw the setting sun about to sink behind its battlements, then it would be natural, all but inevitable, for him to speak of the sun as being “ upon Gibeon.” Similarly if the moon was sailing just above some dip in the distant horizon which he knew indicated the valley of Aijalon, it would be equally natural for him to think and speak of the moon as being “ in the valley of Aijalon.”

Now, to an astronomer, the interest of this fact lies here. Such a sentence as that ascribed to Joshua contains two simple astronomical observations; it is, in technical astronomical language, a record of the altitude and azimuth of the sun and moon at the moment of utterance. To make the observations complete, we need two further facts to be supplied to us:—“Where was Joshua standing at the moment?” and “What was the time?”

We are assuming, then, for the moment that the sun and moon were both low down in the sky; the sun had either just risen or was just about to set—that is, it was either early in the morning or late in the evening. But the moon also had either just risen or was just about to set. But they can never be seen together when both are rising or both setting, for in that case the illuminated portion of the moon is only the thinnest possible thread of light, and is completely drowned by the intense brilliance of the sun close at hand. It follows, therefore, that if the sun was rising, the moon must have been setting, or if the sun was setting the moon must have been rising; in astronomical phraseology, the two lights must be nearly in opposition to each other, and the moon must have been almost full.

The view most frequently taken by commentators is that the sun was near its setting, and that Joshua wished the day to be prolonged. But in that case, Gibeon and the sun must have appeared to him as on his western horizon; but as the valley of Aijalon is further to the west than is Gibeon, the moon must likewise have been setting, in which case, as we have already seen, it must have been invisible.

We must therefore try the other alternative—that the sun must have just risen, and Joshua must have had Gibeon on his east horizon. If he was between Gibeon and the valley of Aijalon, the moon would have been setting over Aijalon. The relative positions of the two places have not changed during the ages, and to Joshua, placed between the two, the sun must have been roughly 17° south of the east point of the horizon, and the moon, nearly at the full, 17° north of the west point. But this would imply that the time of the year was between the end of October of our present calendar and the middle of February. But the month of February was already long past, since the Israelites had kept both Passover and Pentecost. October cannot have come, for since Beeroth, Gibeon and Jerusalem are so close together, it is certain that the events between the return of the

Israelites to Gilgal and the battle of Beth-horon cannot have been spread over several months, but must have occupied at most only a few weeks. It is therefore impossible that Joshua, when he spoke, saw the sun rising over Gibeon, or the moon setting over Aijalon.

Have we therefore proved that the narrative is in error? No. We have simply stopped short in reading it. If instead of ending our quotation with the twelfth verse of the chapter, we had gone on to the thirteenth, we should have found that the position of the sun was stated in definite astronomical language: "So the sun ceased in the midst of heaven" (A.V., "stood still"). "The midst of heaven" signifies the halving, the bi-section of the heavens, and means that the sun was on the meridian. It was noon. The two positions of the sun and moon that we have already tested and rejected are the only two in which the two "great lights" can appear in England as being closely connected with terrestrial objects. But there is a position which the sun can occupy in tropical countries—not in England—in which it is in the fullest and most literal sense "in the midst of heaven." That is, when it is right overhead, in the zenith, when a man's foot will cover his entire shadow. This could not take place exactly in Palestine, but at Gibeon, within six weeks of mid-summer, the sun at noon will never be more than 14° from the zenith, and anyone on whom its rays were beating down could only describe it as "overhead" and as "upon" the place where he himself stood. Therefore, when Joshua spoke, he was at Gibeon; it was summer time, and high noon.

Knowing this, we can make important use of the information given us about the moon. With Joshua at Gibeon and the time of day, noon, and the moon low down over the valley of Aijalon, *i.e.*, some 17° north of west, the moon must have been almost exactly in her "third quarter," *i.e.*, "half full," and the date must have been the twenty-first day of the fourth month of the year in the Jewish reckoning. But the moon cannot be so far as 17° north of west in the latitude of Gibeon ($31^\circ 51'$ N.) on the twenty-first day of the month earlier than the fourth month in the Jewish year, or later than the seventh month. Now the twenty-first day of the fourth month is some six and a half weeks after the Day of Pentecost, when the reading of the Law took place, while the twenty-first day of the fifth month would be eleven weeks after. Remembering how close Gilgal, Gibeon and Jerusalem were to each other, and how vital to all the three

parties concerned—to Gibeonite, Amorite and Israelite—was the need for promptitude, it can scarcely be disputed, that eleven weeks is an inadmissible length of time to interpose between the reading of the Law and the battle, and that seven weeks is the utmost than can be allowed.

Adopting, then, the place of the occurrence as Gibeon, noon as the hour of the day, and the date as about the twenty-first day of the fourth month of the Jewish calendar—corresponding *that year* to July 22nd of our present calendar with an uncertainty of one or two days on either side—the sun’s declination would be approximately 21° north, and at noonday it would be within 11° of the zenith. The sun would have risen almost exactly at 5 a.m., and would set almost exactly at 7 p.m., the day being 14 hours long. The moon would have been in about her third quarter, and in north latitude about 5° , it would have risen about 11 o’clock the previous night and have lighted the Israelites during the most difficult part of their night march; it was now at an altitude of 7° , and within half an hour of setting. The conditions are not sufficient to fix the year, since from the nature of the luni-solar cycle there will always be one or two years in each cycle of nineteen years that will satisfy the conditions of the case. The date of the Hebrew invasion of Palestine is not known with sufficient certainty to limit the inquiry to any particular cycle.

At the moment when Joshua spoke, it was, therefore, midday in the fullest heat of summer, and Joshua was at the gates of Gibeon on the summit of the Ridge of the highland of Palestine. The country was then, and is now, one of the hottest countries of the world at that season. The Israelites had already been seventeen hours on the march and in the battle, and had been engaged in severe fighting. The Amorites had no doubt been taken by surprise, and so at a disadvantage, but at least they had been in action only for seven hours, not for seventeen, and therefore should have been much less exhausted than the Israelites. What could Joshua have meant when he issued his command to the sun and moon “to stand still,” or, to translate his word literally, “to be silent,” “to be dumb”?

No man who has ever experienced the intensity of sub-tropical heat can have any doubt as to the true answer. The very last thing that Joshua could have wished for was that the sun that was scorching his already exhausted troops should be fixed overhead in the zenith and continue to pour down its pitiless

rays directly on their heads for many hours still to come. There were seven hours of the afternoon yet before him : the day was far from drawing to a close. If he commanded the sun "to be silent" in what was that silence to consist? In refraining from moving, or in refraining from oppressing?

The answer is given unmistakably by the narrative itself. The sun refrained from oppressing. For the Lord sent a mighty hailstorm, evidently coming, as summer hailstorms always come in Palestine, from the Mediterranean Sea. The dense storm-clouds sweep across the low country of the coast and are forced upward as they meet the slopes of the Ridge. As they ascend the air becomes more rarified and the temperature falls rapidly. Thus the moisture with which they are laden is not only condensed but frozen, and hailstorms of a violence approaching that described in the narrative are not unknown. The dazzling glare and fierce heat were replaced by a grateful shade and a bracing coolness.

How was it that the hailstorm does not seem to have injured the Israelites?

It seems to me that we may make a plausible conjecture from noting the strategy which Joshua is recorded to have adopted in his second attack upon Ai. His problem now was similar but on a larger scale. The most obvious line of march for him to take was up the valley of Achor, past the ruins of Ai, and so to the little city of Beeroth, now become his ally, and thence to move southward to the relief of Gibeon. But an advance by that route would have left to the Amorites, if defeated, an easy line of retreat to their base at Jerusalem. Could he again adopt enveloping tactics? We are not told whether he did or not, but I would suggest that he may have sent a considerable detachment to Beeroth under his lieutenant, with orders to draw on the enemy as far from Gibeon as he could, until Joshua should signal to him that the main army was successfully established upon the Ridge between Jerusalem and Gibeon. As in the battle of Ai, the important point was that neither of the Israelite forces should be taken at a disadvantage while forcing their way up the ravines, and before they could emerge from them and deploy upon the tableland. He was operating in the very region where somewhat later the eleven tribes suffered most terrible losses at the hands of the Benjamites in the first inter-tribal war, the forces holding the higher ground being able to overwhelm their opponents with impunity.

If this was Joshua's plan of campaign, his strategy was

completely successful, up to a certain point. Probably the Amorites expected him to move upon Gibeon by way of Beeroth, and moved out to threaten Beeroth early in the day, leaving of course a contingent to mask Gibeon. Directly Joshua learned from his lieutenant that the Amorites were in strong force before Beeroth, he would order his main army to move upon Gibeon, and, as the narrative tells us, he destroyed the Amorite troops, who no doubt were left there to continue the siege. These, when attacked, would send hasty messages to the five kings who were with the main body before Beeroth, to tell them that the real attack was being made at Gibeon, and that their forces there were being destroyed. At this news the Amorite kings were seized with a panic, as the Lord had promised to Joshua should be the case. "Fear them not: for I have delivered them into thine hand; there shall not a man of them stand before thee." The Israelite army from Beeroth cut off any retreat to the north; Joshua at Gibeon barred the way to the south and west; one narrow and difficult road alone remained—the road through the two Beth-horons, and along this road they rushed in headlong flight. Then it was that Joshua, seeing that his men were exhausted by their long efforts and by the heat of the day, and that the Amorites had a start of some miles along the Beth-horon road, issued his commands to the heavenly bodies:—

"Sun, cease thou (*i.e.*, *from shining*) over Gibeon,

And thou, Moon, in the valley of Aijalon.

"And the sun ceased (*from shining*), and the moon desisted, until the nation had avenged themselves on their enemies. Is not this written in the book of Jasher? So the sun ceased in the midst of heaven, and hastened not to go down about a whole day."

The explanation of this last statement is found in verse 10, in which it is stated that the Lord "chased the Amorites by the way that goeth up to Beth-horon and smote them to Azekah and unto Makkedah." The Israelites had of course no time-keepers, no clocks or watches, and the only mode of measuring time available to them was the number of miles they marched. Now from Gibeon to Makkedah by the route indicated is some thirty miles, a full day's march for an army. It is possible that at the end of the campaign, the Israelites, on their return, found the march from Makkedah to Gibeon heavy work for an entire day. Measured by the only means available to them, that

afternoon had seemed to be double the ordinary length. "The sun had hasted not to go down about a whole day."

Was this a miracle? It was certainly a wonderful feat of human strength and endurance. But the Israelites must have been mightily refreshed by the sudden veiling of the sun's glare and the assuaging of his heat; still more by their Captain's word of confident command and the manifold signs of the Divine presence with them. Men can do great things when they know that God is indeed helping them.

This great occurrence appears to be referred to in one other passage in Scripture—the Prayer of Habakkuk. Here again the rendering of the English version is unfortunate, and the passage should stand:—

"The sun and moon ceased to *shine* in their habitation :
 At the light of Thine arrows they vanished,
 And at the shining of Thy glittering spear.
 Thou didst march through the land in indignation,
 Thou didst thresh the nations in anger."

(Hab. iii, 11–12.)

There is one passage in the chapter to which I have made no reference as yet. It is verse 14:

"And there was no day like that before it or after it, that the Lord hearkened unto the voice of a man: for the Lord fought for Israel."

What does that mean? When you go home, take your concordances and look out the words "hearken," "hearkened," "hearkening," and the like, and you will find in the majority of cases that they mean "obey." "To hearken unto the voice of a man" is to obey that man's command.

That is what is meant. Joshua did not *pray* to God that God would order the sun and moon to obey him. He was there as God's lieutenant-general, and he himself issued orders to the sun and moon, and the Creator of sun and moon, Who guides them in their paths in the heavens, by Whom alone they shine, and by Whom alone they are darkened, obeyed the voice of a man and "fought for Israel."

There was no day like it before. Nor was there any day like it after it, until there came another Joshua, Who did not call a storm from the sea, but Who commanded the storm and it became a great calm. And His disciples said:—

"What manner of Man is this, that even the winds and the sea obey Him?"

DISCUSSION.

Rev. J. J. B. COLES, after remarking how glad they always were to see Mr. Maunder's name on the list of Lecturers, pointed out that the view he had put before them as to the restricted and local range of the miracle of Joshua's Long Day was shared by many Christian students, including the late Canon A. R. Faussett.

Bearing in mind the inconceivable vastness of the solar system and still more of the stellar universe, with its light years as measuring units, the explanation of a local range of the miracle of Joshua is perhaps more generally acceptable, but, on the other hand, the going back of the sun on the sundial of Ahaz (Isa. xxxviii, 8), and the words in Hab. iii, 11, "the sun and the moon stood still in their habitation," and the allusion to "the wonder that was wrought in the land," in 2 Chron. xxxii, 31, and also the Lord's words as to the signs in the heavens which will coincide with His action as the true Joshua in the future crisis of Israel and the nations, seem to support the view held by many others, that a stupendous miracle was wrought, and more in accordance with the actual words of Holy Scripture than the explanation suggested by the Lecturer.

Mr. SIDNEY COLLETT said he was sure that those who attended these meetings were always interested at anything which fell from Mr. Maunder's lips, especially on the subject of astronomy.

On this occasion, however, he was quite unable to follow the Lecturer in his conclusion that what the narrative taught was, not that the day was lengthened in response to Joshua's prayer, but that the sun's heat was tempered by the intervening clouds of a hailstorm.

Now this theory—for I submit it is only a theory—seems to me impossible for the following reasons :—

- (1) If this incident had simply consisted in the Lord sending a storm in answer to Joshua's prayer, it would not be true to say "There was no day like that before it or after it" (verse 14); for a similar thing did happen in answer to Elijah's prayer, when "the Heaven became black with clouds and wind, and there was a great rain" (1 Kings xviii, 45), and in James v, 16-18, we are enjoined to expect similar answers to our prayers. Indeed, many

of us can testify to the fact that God has often heard and answered believing prayer in regard to the weather.

- (2) But the principal fact that makes Mr. Maunder's theory impossible is that the great stones from heaven which the Lord cast upon the Amorites (Josh. x, 11), and which Mr. Maunder interprets as "a great hailstorm with thick clouds," took place *before Joshua called upon the sun or moon to stand still, or be silent* (Josh. x, 12), and therefore could not possibly have any direct connection whatever with Joshua's prayer to the sun except that, according to the Scripture record, the Lord helped Joshua first by casting great stones from heaven upon the Amorites; and "then" afterwards (as an entirely separate and subsequent Divine intervention) made the sun and moon stand still (or be silent) in answer to Joshua's prayer.
- (3) However, as the late Dr. A. T. Pierson once said, when various interpretations are put upon a difficult passage of Scripture, the simplest and most obvious is generally the correct one. So here, when we read that the sun stood still (or "was silent") in the midst of heaven, and hasted not to go down about a whole day (verse 13), we are, I submit, driven to the conclusion that the words mean that, in spite of astronomical difficulties (which are not difficulties to the Almighty Creator), that day was in fact lengthened (see also Hab. iii, 11), making the statement in verse 14 literally true that "There was no day like that before or after it."

It is also a well-known fact that the three great record-keeping countries of the world are Greece, Egypt and China, and these, with India, have all an ancient record of a long day.

The Chinese record, which is the most remarkable, occurs in the essays of the famous Chinese T'aoist, philosopher and alchemist, Huainan Tzu, thus :—

"Duke Yang of Lu (1058-1053 B.C.), being engaged in a bloody battle with the army of the Han State, and fearing lest evening should close in and interfere with his victory, he raised his spear

and shook it at the declining sun, which straightway went backward in the sky to the extent of three zodiacal signs ! ” (six hours).

While the Indian account, which is equally striking, is preserved in Hamilton’s *Key to the Chronology of the Hindoos*, vol. ii, p. 224, as follows :—

“ It is recorded in the life of Chrishnu (the black shepherd prophet of the Hindoos), that in the Cali year 1651 (which corresponds with our 1451 B.C., the very year in which Joshua entered Canaan), the sun delayed setting, to hear the pious ejaculations of Akroon, who descanted on the virtues of Chrishnu, as he journeyed to Bindreben ; and that on his arrival in safety, that planet went down, making a difference of about twelve hours.”

Now, it is not difficult to trace in all these strange stories the corrupted record of an event of which the true account is found in the Bible, each country, however, substituting the name of some national hero in the place of Joshua, while the stories themselves are naturally coloured with the necessary local conditions which the particular country required.

Mr. W. Hoste ventured to criticize the interpretation of the reader of the paper, in spite of its originality and interesting character. “ Sun, stand still,” would mean nothing more than “ Cease piercing us with thy vertical rays,” and the answer of the Lord would be nothing more than the veiling of the sun, which so refreshed the Israelites that they could do in seven hours the work of a whole day. Certainly this would be in itself a miraculous result from so inadequate a cause ; but we must note that the moon also was commanded to “ stand still.” We have heard of people being “ moon-struck,” but otherwise the rays of the moon hardly need to be moderated. However, the Hebrew דָּמָה , of course, does mean “ be silent,” or perhaps “ cease doing what you are doing.” But sun and moon were not only shining, they were on the move, so “ ceasing to move ” is equally admissible as an interpretation. Of course, when we say the heavenly bodies ceased to move, we refer to results gradually experienced, not immediately detected. In verse 13 we read, “ The sun stood still (same word, דָּמָה) and the moon stayed ” (דָּמָה —ordinary word for standing). But at the close of the verse it is recorded, “ So the sun stood still (this time the word is דָּמָה too) in the midst of heaven, and hasted not to go down about

a whole day." This would certainly be rather a clumsy way of saying that owing to the refreshment from the cloud the children of Israel were able to do a day's work in a third of the time; at any rate, the expression need not imply anything more than that the apparent motion of the sun seemed to slow down. The word translated "Stand still" in verse 12 is the word translated "*Rest* in the Lord" in Ps. xxxvii, and in 1 Sam. xiv, 9, Jonathan uses it when speaking of the Philistines to his armour-bearer: "If they say thus unto us, Tarry (רמכ) until we come to you: then we will stand still (עמד) in our place and will not go up unto them," so that the words seem by their usage to be closely allied, if not practically synonymous. "Stop what you are doing and stand still," or "Halt, stand easy," so that even if we accept the ingenious idea of the veiling of the sun by a storm-cloud, the other thought of an actual lengthening of the day, an arrest of the usual progress of nature by Divine power, is not ruled out.

If a mere meteorological change were intended in answer to prayer, it would seem unpardonable hyperbole to add, as in verse 14, "There was no day like that before it or after it, that the Lord hearkened unto the voice of a man." As a matter of fact, nothing is *said* of the sky being cloudless during the battle, nor of the consequent fatigue of the Israelites, nor of the storm-cloud, nor of the extraordinary refreshment resulting. All these have to be introduced to build up an interpretation. The expression, "So the sun stood still and the moon stayed, *until* the people had avenged themselves," conveys a clear impression of a prolongation of the day, quite apart from and independent of the experience of the Israelites. Joshua *ex hypothesi* would see that more time would be required to complete the victory than the seven hours of daylight remaining could possibly afford, and would frame his demand accordingly.

Mr. Hoste suggested that the hailstorm came from the northwest, acting as a barrage to prevent the Amorites escaping to the north and shepherding them back south, to be dealt with easily by Israel. Otherwise it would hardly seem likely that, even though their cities were in the south, the Amorites would have fled down as far as Asekah and Makkedah—cities belonging eventually to Judah—at the risk of meeting an encircling force of their enemies.

Lieut.-Col. G. MACKINLAY said : The very pleasant duty falls to me to propose a hearty vote of thanks to Mr. Maunder for his most interesting and helpful Paper. The Victoria Institute owes a deep debt of gratitude to him for what he has done in the past. The numbers present this afternoon testify to our high appreciation of him now, and we earnestly hope that he will continue his invaluable aid in the future. We tender him our heartfelt thanks. (Applause.)

Mr. THEODORE ROBERTS, in moving a vote of thanks to the Chairman, pointed out that there was a third explanation of Joshua's Long Day which had not been mentioned by the Lecturer or any of those who had taken part in the discussion, namely, that given by H. A. Harper, the late Secretary of the Palestine Exploration Fund, that the continuance of the sunlight was due to refraction. For himself, he was satisfied with the Lecturer's explanation, which was confirmed by Ps. cxxi, 6, "The sun shall not smite thee by day nor the moon by night."

LECTURER'S REPLY.

As I was not able to take any notes of what I said in reply to the discussion summarized above, I have been obliged to substitute for them an answer prepared later.

In reply to the Rev. J. J. B. Coles, I am very anxious to make it clear that I do not seek either to explain, or to explain away, the miraculous in Scripture history. But it is necessary to distinguish between that which is miraculous and that which is natural. In the present instance there is a dispute as to the interpretation of certain words in the narrative which makes it doubtful wherein the miracle consisted. Mr. Coles has referred to the going back of the shadow in Hezekiah's reign as being parallel to our present subject ; I would venture to urge that there was in that case an unmistakable mark of a miracle in the fullest sense of the word. In God's government of the material universe we find that if the antecedents be the same, the consequent is the same likewise. Any apparent deviation from this law we ascribe to the direct action of the Almighty. Now the Lord Himself offered a choice to Hezekiah, which of two contrasted events should be given to him as a sign. Hezekiah chose the "hard thing," *i.e.* the result contrary to the natural order, and the Lord

fulfilled that choice to him. The fact of the event conforming to Hezekiah's choice warrants us, I think, in saying that this was no *natural* consequent of the antecedents.

In the case now before us, our only *authority* concerning the miracle is contained in the chapter itself. The prophet Habakkuk (Hab. iii, 11) indeed alludes to the events recorded in the chapter, but it is no more than an allusion. In the book called Ecclesiasticus, or "The Wisdom of Jesus the Son of Sirach" (xlvi, 1-6), those events are fully described, but nothing is added to our knowledge thereby; indeed, one important statement is contrary to the Scripture, and I believe that in general members of the Victoria Institute approve the VIth Article of the Church of England, which expressly confines the name and authority of "Holy Scripture" to the books of the Canon, from which Ecclesiasticus, and the other books which we usually denominate "the Apocrypha," are excluded. Much more, then, can no authoritative evidence regarding a Scripture miracle be derived from any heathen source. I was very sorry, therefore, to find that a number of "old wives' fables," which I had hoped had long ago passed into deserved oblivion, were again brought forward. They bear on their face the signs of being mere "lying wonders."

Thus we have the alleged stopping of the sun in Mexico, which cannot have corresponded to "Joshua's Long Day," because Mexico is more than nine hours distant in time from Palestine, so that it was only two or three hours past midnight in Mexico at the moment when Joshua at Gibeon gave his command at noon. The sun, therefore, had not risen in Mexico, and no observation of it could have been made, either of its moving or of its ceasing to move.

The Chinese record is clearer still, for it states that the sun went backwards in the sky to the extent of three zodiacal signs. That is to say, the sun seemed to go back with respect to *the stars*, which implies, not that the diurnal rotation of the earth was reversed for six hours, but that the annual revolution of the earth round the sun was reversed for three months; in other words, that the year was put back by a full season. When we have swallowed this camel, there is still a gnat to be strained at, viz.—that the constellations of the zodiac are not visible while the sun is up.

The quotation from Herodotus is even less satisfactory, because it is evidence on very indirect hearsay, removed a thousand years from the occurrence. The statement of Herodotus further

would imply not a single stoppage of the sun on one unique occasion, but of four distinct reversals of the direction of the earth's rotation. Probably Herodotus misunderstood some mystical statement of the Egyptian priests, and gave a literal meaning to what they were expressing figuratively.

The quotation from Alexander Hamilton is correctly given, but evidently Mr. Collett, who brings it forward,* has not studied Hamilton's book, which was written to show that Indian chronology was not chronology at all in our sense of the word ; it was symbolical, and Hamilton's belief was that he had found a clue to the symbolism. The chronology is certainly unreal, but Hamilton was not aware that that particular phase of Indian astronomy was not ancient, but belonged to the dark ages between the sixth and eleventh centuries A.D.

Our only authority, then, for this narrative is the chapter itself, but there are three verbs in the chapter the interpretation of which is in dispute. The first is *damam*, "to be dumb," that is, "to cease from speaking"; the second, *amad*, is used as a parallel word to *damam*; and the third is *uts*, "to urge oneself," "to hasten."†

* I am obliged here to point out that Mr. Collett's book, *The Scripture of Truth*, however excellent for the most part, has one short section in the eighth edition, pp. 284-288, entitled "Joshua's Long Day," which I would beg him to delete *in toto* from every future edition. This whole section is either wrong in its assertions, or misleading in the way in which they are applied.

† Gesenius, in his *Lexicon*, translated by S. P. Tregelles, 1881 Edition gives the following information :—

- (1) *Damam*, p. 203. (1) To be silent, to be still. (2) *To be astonished, confounded.* (3) *To be quiet, to cease, to leave off.* In a note it is added, "This root is onomatopoeic, and one which is widely spread in other families of languages, . . . it is an imitation of the sound of the shut mouth (*hm*, *dm*). Its proper meaning, therefore, is *to be dumb*, which is applied both to silence and quietness."
- (2) *Amad*, p. 637. (1) To stand. Used of men, and of inanimate things. Followed by propositions—(a) *to stand before a king, i.e. to serve or minister to him*; (b) *to be set over, to confide, to stand by anyone.* (2) *To stand for, to stand firm, to remain, to*

Of these three verbs *damam* is the dominant, seeing that Joshua uses it in his actual word of command; *amad* is the parallel verb, and implies that Joshua's command, whatever it was, was obeyed.

But "Be thou dumb" cannot, in the literal sense, be applied to the sun, for speech is not one of its properties, and we must seek some one or other of the activities which do characterize it as affording us the clue to the meaning intended in this passage.

The first property ascribed to the sun in Holy Scripture is that of giving light. In Gen. i, 14-18, we are told that "God made two great lights . . . and set them in the firmament of the heaven to give light upon the earth." This is the primary function of both sun and moon. The sun has also other properties which are intimately connected with its giving light. It gives heat, it brings forth the fruits of the earth, it has power to "smite." Another property of the sun (and of the moon also), is that both appear to move in the sky (Ps. xix, 6); but whereas their shining is real, their movement is only apparent, and belongs in reality to the earth.

To bid anyone "to be dumb" is to bid him to cease from speaking, for the very word itself is derived from the action of closing one's lips upon one's speech. Where the person or thing addressed is by nature incapable of speech, then "Be dumb" must mean to cease from some action then going on, that can be likened to speech. Now, as we have seen, the sun has two characteristic activities: it gives light and appears to move. Thus the verb *damam* is sometimes used in Scripture, as Mr. Hoste suggests, in this sense of "Cease doing what you are doing." See Lam. ii, 18, quoted by Gesenius in this very connection: "Let not the apple of thine eye cease," that is, "Let not the apple of thine eye cease from weeping." *Amad* is used more frequently in a corresponding sense of "to cease" or "to leave off." Thus in Gen. xxix, 35, and xxx, 9, it is translated "left off"; Leah ceased to bear children. This meaning of "cease" or "leave off" may, if the object is in motion, carry the particular sense of ceasing to move, and both words are occasionally used in that special sense;

endure, to persist, to persevere, hence to remain in the same place or state. (3) To stand still, to stop, as opposed to go on one's way, to proceed.

- (3) *Uts*, p. 23. (1) To urge, to press anyone on. (2) *To urge oneself, to hasten.* (3) *To be narrow, strait.*

but both are also used with the wider meaning of "leave off what you are doing," whatever that might be.

Whatever the action from which the sun was ordered to "cease," that order was given, and it took effect at noon, as we learn by collating verses 12 and 13: "Sun, be thou dumb upon Gibeon. . . . So the sun ceased (to speak) in the midst of heaven, and hasted not to go down about a whole day." In other words, when Joshua spoke, the sun was overhead both to him and to Gibeon, and the time was noon.* As the length of the summer day in the latitude of Gibeon is fourteen hours, and as the Israelites had started from Gilgal the previous evening, for they "went up from Gilgal all night," when Joshua spoke they had been on foot for seventeen hours—marching, climbing the mountains, and fighting—and there were still seven hours of daylight before the sun was due to set. For seven hours, from its rising, the sun had been climbing up the sky to its culmination; for seven hours it would have to go down to its setting. If the command to the sun, "Be dumb," meant that it was to cease its apparent motion, and "to stand still" in the sky, that "standing still" must have been in the zenith, not on the western horizon; it must have taken place at noon, and not just as the sun was about to set.

Some commentators have treated the expression "hasted not to go down" as if it meant "stood absolutely still and did not go down at all." Such a paraphrase is unwarrantable; the sun's ordinary movement across the sky is the outcome of the smoothest and most regular motion that we know—the rotation of the earth on its axis. Any change in that motion is contrary to our experience. To hasten in that motion would be to go more quickly than is usual; "to haste not" does not mean to stand still, but to go more slowly than usual. "To go down" means movement in either case: quick, if the sun "hasted"; slow, if the sun "hasted not."

The question of interpretation comes, then, to a very narrow point. The sun was ordered to cease from one of two activities—from moving or from shining. Which was it? The moving does not belong to the sun, it belongs to the earth, to which no command was addressed. The shining does belong to the sun and is its great function.

* See Dean Stanley's *Sinai and Palestine*, pp. 207, 214.

But if it is asserted that the sun ceased from moving, not from shining, then those who assert this should face and answer the following questions :—

- (1) Why should Joshua have wished the sun to be fixed overhead "about a whole day," before it began to go down towards its setting? We need not debate whether "about a whole day" means 14 hours, the duration of daylight at that season, or 24 hours, the complete rotation of the earth. In the first case, the interval between one sunset and the next would have been 38 hours; in the other, 48 hours.
- (2) If in appearance the sun "ceased" from moving "in the midst of heaven," and remained motionless there "about a whole day," how did Joshua know it? He could not have looked at the sun; it would have blinded him, and there was no object in the heavens with the position of which he could have compared it.
- (3) How did Joshua determine his time that afternoon, and measure the length of that day, seeing that the sun, his only clock, was stopped?
- (4) Further, the natural result of the stopping of the sun when overhead for "about a whole day," would be to increase the temperature of the air beyond anything that mankind has ever experienced. How did the Israelites escape the consequences of Joshua's strange desire?
- (5) What did he hope to gain by it, and why was it granted to him?

Apart from the question of the correctness of the translation, two definite objections have been made.

First, why is the moon mentioned, seeing that its light and heat are negligible? My questioners forget that the difficulty—if difficult it be—is one which attaches to the narrative itself whatever translation we adopt. But I would suggest that Joshua was looking in the direction in which the Amorites were fleeing, in which case he would also have been looking in the direction of the moon, and could hardly have failed to see it.

Next, it has been objected that I have brought the hailstorm out of its proper chronological order. It is not I who have done so; it

is done in the chapter itself. Verse 10 brings the Israelites to Makkedah, where they were at the going down of the sun, while verse 13, which chronicles Joshua's command, shows that he was then at Gibeon, at noon; that is, it records the earlier event after the later. This preference for a logical, rather than a chronological, order is characteristic of many Hebrew narratives.* Further, we are expressly told that these verses, 12 and 13, are extracted from another authority, the Book of Jasher; and it is clear that the extract has been inserted in the most appropriate place.

It should be noted that, whether we think that the sun stood still or whether that it was veiled by cloud, it still remains that the Israelites were at Gibeon at noon, and reached the end of their march at Makkedah at sundown.

It still remains also that the narrative itself gives a clear explanation in verse 11, of the statement in verse 14: "The Lord fought for Israel." It was literally true that "the Lord fought for Israel" when "it came to pass that as" the Amorites "fled from before Israel, and were in the going down to Beth-horon, that the Lord cast down great stones from heaven upon them unto Azekah, and they died; they were more which died with hailstones than they whom the children of Israel slew with the sword."

And now we reach the sentence to which the whole narrative leads up: "There was no day like that, before it or after it" (verse 14). It was unique. What made it so? Some have supposed that it was the length of the day, or the greatness of the miracle. That is not what the Scripture says. After all, how can we mortals judge whether a miracle is great or small? Is anything too hard for the Lord Whose power is infinite?

That day was like none other because of this fact, "that the Lord hearkened unto the voice of a man." That is what the chapter says; there is no hint that it was because the sun stood still, or that the day was long, or that it was a mighty miracle. Every reader of Holy Scripture knows that for one person "to hearken to the voice"

* Col. Mackinlay has shown us in his book, *Recent Discoveries in St. Luke's Writings*, how much additional light is thrown upon Scripture by the readiness with which the sacred writers abandon the strict sequence of events when a special emphasis has to be brought out.

of another means one of two things—that he who hearkens either grants a petition made by the other person, or he obeys his command. Mr. Collett has pointed out, what is obviously true, that God has always heard and answered prayer; therefore this expression, “that the Lord hearkened unto the voice of a man” has in this case nothing to do with any answer to prayer. And Joshua did not offer any prayer; *he issued an order*: “Sun, be thou dumb upon Gibeon and thou, moon, in the valley of Aijalon.” “And the sun was dumb and the moon ceased.” The order was obeyed.

Joshua knew as well as we do that neither sun nor moon could hear him, and that even if they heard, they had no power either to obey or disobey; they are neither gods nor men; their acts or movements are the acts and movements of the Lord Himself, Who alone is their Ruler. God heard His servant's order and He fulfilled it; He hearkened unto the command of His servant and performed it. No event like this is recorded in the whole of the Old Testament; that day stands unique.

Joshua was a real man, with his passions and weaknesses like other men, like ourselves. Forty years long he had been the servant, the lieutenant, of the greatest man who ever lived before Christ came. Many are the advantages of such a position, but it is seldom that a man so brought up develops much self-reliance. So when the crushing burden that Moses had borne was transferred to Joshua, it is no wonder that he faltered. The Lord Himself knew His servant's weakness, and, as we read in Josh. i, the Lord repeatedly exhorted him to “Be strong and of a good courage,” and those over whom he had been appointed to rule gave him the same exhortation. These words were not said to him because he was strong, but because he needed to be. Soon the day came that a most important duty was laid upon him; namely, to ensure that none of the spoil from Jericho, which had been laid under the curse, should be touched by any of his soldiers. In this, his first great responsibility, Joshua failed; the failure was not personal, as though he himself had hankered after the spoil, but clearly he had not so dominated his officers and men that they felt compelled to obey him. And so the sin of Achan followed and the defeat of Ai.

But Joshua made confession of his sin, and carried out faithfully the stern duty which then devolved upon him, and the Lord renewed to him his commission as Captain of the Lord's host. Then in that

great battle which decided the fate of the whole of the south and centre of Canaan, Joshua felt that not only were the Israelites his to command, but the greatest and most exalted objects of nature were so as well. "Sun, be thou dumb upon Gibeon, and thou, moon, in the valley of Aijalon." And the Lord was well pleased with the faith and courage of His servant, and fulfilled his command. "There was no day like that before it or after it, that the Lord hearkened unto the voice of a man : for the Lord fought for Israel."

NOTE.—It lies aside from the main subject of the above paper, but it may give an unsuspected illustration of the definiteness of the relative apparent movements of the heavenly bodies to note that Joshua's description of the positions of the sun and moon carries with it the implication that in the year of the events under our consideration, Tammuz, the fourth month of the Jewish calendar, coincided, almost exactly, with July of our present calendar. (*See* p. 132, lines 8 and 9.)

As the Mosaic calendar had a double relation, being based partly upon the natural year, it followed—as twelve such months were eleven days short of a complete year—that it was necessary to intercalate a thirteenth month occasionally ; such intercalation being introduced in seven years out of every nineteen. Thus the months of the Jewish year vibrate to and fro with respect to the months of our calendar, which is based on the solar tropical year.

But if Joshua's great victory had been gained at midsummer, on the day of the solstice, then since the moon was just about to set when the sun was on the meridian, "in the midst of heaven," the former must have been close to the point in the heavens of the spring equinox, and could not have set over the valley of Aijalon, but must have set due west. If we assume any date for the battle before the solstice, then the moon would have set south of west ; only if the battle took place after the solstice could the moon have set north of west, and not until the solstice was past by a full month could the moon have set over the valley of Aijalon. The battle must have taken place, therefore, about the 22nd or 23rd of July as well as about the 21st or 22nd of Tammuz.