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VOL. LV.



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1923.

THE 653RD ORDINARY GENERAL MEETING.

HELD IN COMMITTEE ROOM B, THE CENTRAL HALL,
WESTMINSTER, ON MONDAY, APRIL 9TH, 1923, at 4.30 P.M.

MAJOR-GENERAL SIR GEORGE K. SCOTT-MONCRIEFF, K.C.B.,
IN THE CHAIR.

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

The CHAIRMAN announced that the author of the Paper was not able to be present to read it, and called upon Lieut.-Colonel Hope Biddulph, D.S.O., the Papers Secretary, to read the paper on "The Irrigation of Palestine in Ancient and Modern Times." This was illustrated by lantern slides.

CONCERNING IRRIGATION IN ANCIENT AND MODERN TIMES, THE CULTIVATION AND ELECTRIFICATION OF PALESTINE WITH THE MEDITERRANEAN AS THE SOURCE OF POWER. By ALBERT HIRTH, Esq., C.E.

(With Lantern Illustrations.)

AS far back as in the days of King Menes of Egypt—perhaps more than 3,000 years B.C.)—canals were built along the Nile for artificial watering or irrigation.*

In Babylonia and Assyria we also read in the inscriptions of Tiglath Pileser, of gardens with irrigation works. Fig. 1 shows a garden with irrigation reconstructed by Layard after the excavations in Mesopotamia.†

The extensive plants of this character converted the whole country into a fruitful and wonderfully fertile "garden of Eden." When later on the country was conquered by Barbarians, her high civilization deteriorated, the irrigation plants went to ruin, and the hot, dry climate changed the once so fertile land into a desert.

Egypt possessed similar extensive irrigation works from the earliest times. In our own days a number of modern irrigation plants—sometimes on an enormous scale, have been constructed by the English in the said countries. Thus, in Fig. 2, we have a bird's-eye view and a sketch map of the irrigation works on the Nile from the Assuan dam northwards. The sluices should be

* *Engineering Wonders of the World*, II, 385.

† *Encyclopædia Biblica*, II, 1647.

noticed on the left, at Assuan, Esneh and Assiout. Farthest north we see the oldest works, the Delta dam, and the Zifta barrage.

A few facts will convey some idea of the vastness of these undertakings and of their importance in political economy. The Assuan dam contains over 1,000 million tons of water. Fig. 3 shows how the famous ancient temple on the Isle of Philæ has been partly inundated by the erection of the dam. The latter is $1\frac{1}{4}$ miles in length, and more than 130 ft. high. Its 180 sluices are capable of letting through up to 15,000 tons of water per second (Fig. 4). The mass of masonry weighs about one million tons. For the sake of comparison we may recall the fact that the weight of the Cheop's pyramid has been computed at about five million tons.

The dams at the Delta, Assiout, Zifta and Esneh were completed at a cost of more than £6,000,000; the total area irrigated in Middle Egypt is 460,000 acres of land. It has been estimated that the increase in the value of the district irrigated amounts to £29,000,000.

In India also the British Government have had extensive irrigation works constructed. Fig. 5 shows a map of the main rivers and the irrigation works. The public works consist of some thirty large and seventy lesser systems, with a total length of canals of 45,000 miles.

The cost of these works was about £30,000,000, which, however, has yielded an interest to the Government of 7 per cent.

In the first instance these works have proved to be of inestimably great social importance. An official report states that the district along the Swat river near the boundaries of the Punjab, was once inhabited by the most savage tribes in the Empire. When, however, the irrigation works made possible a regular cultivation of the ground, the same district was converted into a peaceful country in the course of ten years. The author of the report states as follows: "The irrigation plants in this respect did more in ten years than the whole of the police force of the district could have hoped to do in half a century."

In large areas the amount of rain is not more than 2.5 in. a year, but by the irrigation plants these districts are watered from the large rivers, which in their upper reaches drain areas with an annual amount of rain of up to 30 inches.

The map shows a total (in 1907) irrigated area of more than 18,000,000 acres, and the least extensive of them alone is

considerably larger than the total cultivated area of Norway. Before the English Government took over the administration of India, the latter was often scourged by devastating famines, which have now been considerably checked by the large irrigation works. It has been stated that in certain years, when in one district the people flocked to the English charity organizations for help against threatening starvation, the irrigated districts possessed such a surplus of grain that their profit on the sales in one year paid for their water taxes for seven years. The very great importance of these facts will be seen more clearly if we remember that 1 acre of common grain in India will feed up to three human beings for one year, and that the value of the crops in the irrigated districts amounts to nearly £40,000,000.

The map, Fig. 5, as has been stated, shows (in black) the irrigated areas of India, with a present total of *nearly* 20 million acres. The Chenab works alone have a total length of canal of 2,800 miles, and out of the former desert have created a fertile district with an area corresponding to half the arable land of Egypt, with a population of about one million.

The Chenab works cost £2,000,000, yielding a profit of about £500,000 per annum. In 1907 only, the value of the crops in the district was £2,500,000, and in the whole of the irrigated areas it was about £40,000,000.

Fig. 6 gives an idea of the dimensions of the Indian works.

America (U.S.) also possesses a highly-developed irrigation system in various parts of the country. The map, Fig. 7, shows the irrigated areas (printed in black). There is a total length of canals of nearly 4,000 miles, and about 60 tunnels with a total length of more than 15 miles, 300 miles of roadway and about 1,000 miles of telephone. About 85,000,000 tons of earth and stone have been dug out, about \$50,000,000 have been expended, 1,000,000 acres of land are irrigated and nearly 10,000 families now obtain a living in these formerly barren tracts. (The figures given are approximate, and date from about 1908.)

Amongst the many enormous tunnel works constructed in connection with these irrigation plants, the Gunnison Uncompahgre Valley plant should be mentioned. Fig. 8.

The Gunnison tunnel is about 6 miles long, and 11 ft. 6 in. high, cement lined throughout its length, conducting 35 tons of water per second. The whole plant irrigates 150,000 acres, of

which 60,000 acres may be used for the highest grades of fruit-growing. To-day the fruit plantations yield up to 1,000 dollars per acre.

Fig. 9 shows a sketch of desert in Colorado before irrigation, and Fig. 10 the same area after. Figs. 11 and 12 show apple-trees and date palms on the irrigated land.

The facts given immediately show the enormous importance of irrigation for vast areas of the most fertile countries on earth.

In 1907 Sir William Willcocks planned an artificial watering of Mesopotamia embracing an area of about 3,000,000 acres.

The scheme aimed at re-fertilizing the once so fruitful country, which has been little more than a desert for thousands of years.

Of this plant, which is estimated to cost about £20,000,000, one part, among others, is the Hindia dam, which was finished in 1913.

I will now turn to another irrigation scheme which originally dates just as far back as several ancient plants, *i.e.* to about 570 B.C. I refer to the irrigation of the Plain of Jordan between the Lake of Genezareth and the Dead Sea in Palestine. The whole scheme may be seen from the coloured plate, showing a bird's-eye view of the country and visualizing the projected constructions, according to the plan, as understood from the Biblical records—prophetic.

Fig. 13 shows this valley of the Jordan, photographed from an aeroplane at an altitude of about 6,500 ft. The topographic features of Palestine are unique. The whole of the Valley of the Jordan slopes gently from the Lake of Genezareth, the surface of which is about 650 ft. below the level of the Mediterranean towards the Dead Sea, another 650 ft. deeper down, at about 1,300 ft. below sea level.

Fig. 14 shows four maps, two indicating climatic conditions, one geological strata, and one the present distribution of vegetation.

The climatic conditions are given for the summer and winter seasons. Various lines indicate the amount of rain falling, which during the months October to March in Lebanon and Hermon may average about 40 in., while east of the Hermon and in the South there is only some 5 in. During the summer season, from April to September, the rain index for the whole country is less than 5 in.

The arrows indicate the direction of the wind, and the isotherms on the first map show the average temperature for

January, those on the second map the average for July. The geological map indicates the consistency of the substratum rocks, and the vegetation map shows the flora of the country.

A special feature should be noticed in the extensive areas of wood-lands, pastures and fertile arable land.

During the greater part of the year the sky is practically cloudless. All rain comes with the winds from South to West. The temperature differs very much with the highly varying altitudes, also with the seasons.

In the Jordan Valley the summer temperature rises to about 122° Fahr. The air is very clear, and, on the whole, the climate is healthy. To the North Hermon lifts its snow-covered peak up to an altitude of 10,000 ft. above sea level.

The vegetation map shows us that wide areas are covered with eminently fertile soil (from limestone), which is suitable for cultivation; irrigation only is needed in these districts, which in Joshua's time "flowed with milk and honey."

It is generally assumed that the reason for this transformation of a rich and fertile land into a desert is to be sought in the deforestation of the mountains and the lower reaches.* The great forests of cedars were cut down ruthlessly by King Solomon and others before him.†

Also there have been found very ancient (from 1000 B.C. and earlier) and imposing constructions of wells, cisterns and aqueducts, some of which were cast in a kind of cement‡ and even laid down in siphons—an art, however, which was lost before the arrival of the Romans.§ The soil is so fertile and the climatic conditions so favourable that the costliest fruits of the south, including olives, may in parts be grown with advantage,|| even under the present conditions. Mr. Volrath Vogt mentions the fact that wheat yields 80 fold and barley 100 fold with indifferent cultivation. Irrigation of 400 sq. miles would demand, at an estimate, about 50 tons of water per second (with an estimated working year of 200–300 days).

By raising and partly re-draining the Lake of Genezareth and the Merom Lake, and also by barrage arrangements high

* Cp. Smith, *Dict. of the Bible*, pp. 669, 670 (Vol. II), figs. 15 and 24, Art. "Palestine," and Vol. I, p. 631, Art. "Forest."

† *Vide* 1 Ki. v, 15. 2 Chron. ii, 2, 18—80,000 hewers.

‡ Cp. Neil, *Palestine Explored*. Art. "Cement-Hhohomrah," p. 776.

§ Volrath Vogt, *Det Hellige Land* (Kristiania, 1879).

|| Cp. Wingate, *Palestine, Mesopotamia and the Jews*, p. 229.

up in the more important tributaries—in short, by making use of the river and its tributaries to the fullest possible extent—the computations and estimates worked out, and also the investigations made of the actual facts, justify the assumption that there would be sufficient water.*

The scheme is to build canals on both sides of the River Jordan and parallel with it. The length of each of these canals would be nearly 60 miles, and they must have a capacity of about 25 tons of water per second at the inlet, decreasing evenly to nil at the end of the canals. Throughout their length the canals would be furnished with suitable outlets for the distribution of water over the plains sloping towards the River Jordan. Drainage of these areas (like that which is nearly always necessary in connection with irrigation in U.S.A.) would probably be required to a very small extent.

Dr. Clarke informs us that the soil is exceedingly rich, and only requires cultivation and water in order to make the Valley of the Jordan one of the most fertile areas on earth.†

The climate is subtropical, and the costliest products may be grown with advantage. From Jaffa alone the export of oranges is worth £80,000 to £120,000, and the exports also include great quantities of maize, melons, bananas, apricots, pears, peaches, almonds, walnuts, tobacco, silk, lemons, grapes, olives, dates, figs, rice and sugar-cane, besides all kinds of vegetables. This is so in spite of the fact that next to nothing has been done to encourage improvements. On the contrary, the Turks have hindered all progress by means of heavy taxation. The number of inhabitants, which, according to Mr. Volrath Vogt's statement, has been estimated as about 5–6,000,000 in the days of David and Solomon‡ (about 1000 B.C.), is now hardly much more than half to two-thirds million, a number which could undoubtedly be multiplied by five under a reasonably wise Government.

Where the River Jordan falls into the Dead Sea the country is simply a barren desert, with an extremely poor fauna and flora. Situated as it is nearly 1,300 ft. below sea-level, and

* Vide *Jüdische Rundschau*, No. 93–94, 1920.

† Galilee, Mr. Malte Brun declares, might be made into a Paradise under an enlightened Government. Near Bethlehem ripe peaches have been plucked on a tree grown from a kernel which was sown in the year before, and we are told of as many as five rotation crops in one year.

‡ *Cp. The Zionist Review*, Vol. IV, No. 5, Sept., 1920, p. 82 : . . . “3 to 5 millions.” *Cp. Sir Alfred Mond's figures.*

with steep mountains on all sides, the basin has now a nearly insufferable temperature in summer time, and the evaporation from the surface of the lake is exceedingly great. The difference between high water and low water mark is about 16 feet, which corresponds to an annual evaporation of 5,000 million tons of water—and from this fact the annual inflow of water has been estimated. (Estimates are very variable.)*

By reason of these extraordinary circumstances, and because the lake has no outlet, the water of the Dead Sea is very salt, containing more than 25 per cent. of salts. The mineral contents chiefly consist of magnesia, lime, potassium and sodium salts. It is intended to utilize these by means of the hydro-electrical plants which form part of my scheme. No fish can live in these waters. At certain places the lake has a depth of about 1,300 ft. It affords an interesting field for scientific research. Thus, for instance, the north-going current in the eastern part remains unexplained,† also the continuous periodical variations in the water level (apparently connected with the barometric pressure), further, the remarkable electric and meteorologic phenomena, and, finally, the famous phosphorescent line of foam which appears every morning along the central line of the lake, and which has given rise to much superstition among the people.

As a source of energy there is planned a hydro-electric plant on the western shore of the Dead Sea, which would receive its energy from the Mediterranean through a tunnel under Jerusalem.

As has already been stated, the scheme is far from being new—it is probably some 2,000–3,000 years old—but its realization has neither been demanded, nor has it been feasible till just now or in the immediate future. As early as in 1912–13 I placed the scheme before prominent authorities on technical and scientific questions, and also before several Zionist associations, and since then I have worked out the scheme in more minute detail. The matter received renewed interest by the scheme laid out for a tunnel under the Channel proposed by the Inter-Allied Parliamentary Trade Conference.

This tunnel was to be somewhat shorter than the “Jerusalem tunnel,” but with a greater diameter. It has been planned double, with a diameter of 18 ft. and 33 miles long, to cost

* Daily evaporation is roughly estimated to average about $\frac{1}{2}$ -inch. *Cp.* also *Encyclopædia Britannica*, VII, p. 879.

† *Cp. Teknisk Ukeblad*, No. 36, 1919, and the interesting analogy from the Kristiania fiord.

about £13,000,000. The period of building, with two entrances, is estimated at 5-6 years, or about 400 ft. progress per day.

For the sake of comparison I may mention that the Simplon, St. Gotthardt and Mt. Cenis cost from £70 to £80 a foot at the time of construction. The Norwegian "Gravehalsen tunnel" was considerably cheaper.

The dimensions of the Dead Sea tunnel cannot be decided until some time when detailed plans are available and when the number of horse-power required has been fixed.

Preliminary estimates show that practically without raising the level of the Dead Sea, 100,000 h.p. may be taken out for light and power for the country, for railways and industrial purposes, and for possible export to surrounding countries.

It should be remembered in this connection that most of the rain-water from the upper reaches of the country will then go into the earth for irrigation, instead of into the River Jordan.

The geological formation of the mountains is the most favourable imaginable for the building of tunnels, which have an ancient tradition in Palestine (*e.g.* Siloam conduit, about 700 B.C.?).

The geological map, Fig. 16, shows that the main part of the surface mountains consist of the minerals most easily worked, viz., sandstone and lime from the Carbon Age.* Near the Dead Sea there are whole hillocks of pure salt, with a deposit 6 miles in length, $1\frac{1}{4}$ miles in breadth and about 650 ft. deep. The valley of the Jordan is supposed to have been formed by an earthquake.

The tunnel under consideration, with a capacity of only 15 tons per second, has been estimated to cost about £15,000,000. To this amount should be added the cost of power station and cables, the irrigation plants, distribution of power, etc., etc. Even with high prices for these plants, and with a reasonable price as compared to other sources of energy on the electrical power delivered, the provisional estimates computed by experts are as favourable, when all things are considered, as any similar plant previously known before in any part of the world.

It is intended that part of the sea water from the tunnel should be allowed to run down the mountain side in a thin stream ("film"), causing the water to evaporate in the dry air and (owing to the prevailing high temperature) leaving the salt behind, which may thus be collected both cheaply and

Vide Dawson, Modern Science in Bible Lands, pp. 439 and 474.

easily. Possibly the high percentage of salt in the lake might be utilized later on, for instance, by means of electrolysis. At the southern end a dam should be built at the old ford of La Lisan, whereby this part of the lake would be laid dry by evaporation and the rich deposits of asphalt at the bottom of the lake might be utilized.

A similar irrigation of the plain round Saron has also been proposed. The Dead Sea and the Plain of Jordan were, the Turks maintained, the private property of the Sultan.* After Sir A. Balfour's letter of November 2nd, 1917, to Lord Rothschild†—one of the most prominent men amongst Zionists—it may be assumed, we hope, that the dead hand of the Turks will be removed, and that the names “the desert” and “the Dead Sea” will be forgotten, when life and activity fill this eminently fertile district, which was once “the land flowing with milk and honey.”

The scheme which I have just mapped out is as I have already stated, not at all new. I believe I can trace it in the messages of the two prophets Ezekiel and Zechariah, which are to be found in the Old Testament.

In Amos iii, 7, the Lord God promises to “do nothing, but he revealeth his secret unto his servants, the prophets.”

Thus the children of God should go to the prophets to seek light on dark things, small as well as great, and, presumably, above all on all things pertaining to his Own People and Country, the Holy Land, of which so very many of the prophecies of the Old Testament speak.

We will here further investigate a few of the passages which the present speaker considers fundamental in this respect. In Ezekiel xxxvi, Ezekiel xlvi and Zechariah xiv the Lord God, more than two thousand years ago, gave us information concerning a future which cannot yet have materialized, but which to me has been of the greatest importance in the study of the future fulfilment of the numerous prophecies in the Bible—spiritual as well as political and technical.

My foundation is the belief in the infallibility of the Word of God and Its verbal inspiration, also the belief that Its truth is

* This was first written in 1912-14—pre-War.

† “His Majesty's Government regard with favour the efforts made to establish a national home for the Jews in Palestine, and will support this scheme as far as is in their power. I should feel grateful if you would communicate this statement to the Zionist Associations.”

eternal, and even though we now understand but in part, we shall *soon*—as truly as this dispensation is nearing its end—be allowed to see God's Secrets fully revealed—like a three-colour print, the three single plates of which each show *truth* but in part only, but when finally they are placed together show the full perfect truth of the image—humanly speaking.

Thus Ezekiel xxxvi reveals to us the fact *that* certain things will take place at some future time, whilst we may assume his xlviith Chapter and also Zechariah xiv to describe *how* these things will take place—the time for the occurrences to be reckoned according to the Holy Chronology of Prophecy.

Perfect clearness has not yet been revealed to us. Thus, for instance, Ezekiel xlvii, vv. 3–5, have as yet hardly been rightly understood in the material plane. Spiritually the same verses have been well interpreted from olden times. The same may be said of Zechariah xiv, 6–8, all these verses, however, *may*, at least tentatively, be explained on a material basis.

As is always the case in so many lectures on this subject, the present speaker begs to point out that he does not desire to be dogmatic. Rather, he attempts to suggest fresh solutions. Let every Christian pray for light—and it shall be given to him.

In Ezekiel xxxvi the prophet receives God's command to prophecy *unto** the mountains of Israel, so that they (*i.e.* the mountains) hear the word of the Lord. And to give any possible spiritualization no loophole for misinterpretation, the "hearers" of the word of the Lord are enumerated in v. 4: the mountains, the hills, the rivers, the valleys, the desolate wastes and the ruined cities.

Why does the Lord speak thus?

Because the enemy has declared the ancient high places to be his possession and because he longs to devour the people, because they are "taken up in the lips of talkers and are an infamy of the people." (Ezek. xxxvi, 3.) We call to mind the anti-Semitic movement of the present time, and Turkish Bolsheviks crying out for a "free Palestine."

These same mountains shall shoot forth their branches and yield their fruit to His people of *Israel*—who at the time shall be "at hand to come." They "*shall be tilled and sown,*" v. 9 and "*all the houses of Israel*" (*i.e.* the twelve tribes plus the spiritual Israel, *see* ch. xxxvii, 21–22 and xlvii, 22–23) *shall* then

* Not "against" as in xxxv, 2.

come to them, the cities *shall be* inhabited and the ruins rebuilt (v. 8-17). We see the fulfilment of all these prophecies before our very eyes—as well as of the previous chapter and the two following ones. (“In the day”—Ezek. xxxvi, 33.)

Why and for whose sake shall the miracle take place? “Not for your sakes, O house of Israel,” but “*for Mine holy name’s sake*, which ye have profaned among the heathen . . . and the heathen shall know that I am the Lord” (Ezek. xxxvi, vv. 22-23), and the heathen that are left* shall know that I the Lord built the ruined places and I the Lord have spoken it and I will do it” (v. 36).

How shall this come to pass? Are there any hints to be found for the leaders of these events, like those given to Moses before the exodus from Egypt, and to Daniel before the evacuation of Babylon? Has He who revealed the hidden things to Daniel (Dan. ii, 28, Ezek. xxxviii, 8) given us any further details regarding rivers, valleys and mountains, that might yield to us light we seek?

The present speaker believes: *Yes*. In Zech. xiv, 4, we read that “the Mount of Olives shall cleave in the midst thereof toward the east and toward the west and there shall be a very great valley,” and in Ezek. xlvi, 1-2, that from a place further indicated there shall run waters into the (Dead) Sea, with the result that “the waters shall be healed” (v. 8) and “there shall be a multitude of fish because these waters shall come thither” not fresh-water fish, but, “as the fish of the great sea, exceeding many.”

The two first verses of the chapter describe in detail the place from whence this great transformation of the natural conditions shall take its beginning. The healing waters shall issue from a place “at the south side of the altar” (in Jerusalem)—“from under the threshold”—and they run “towards the east country” and “go into the (Dead) Sea.”†

This place, so carefully defined in two different ways (in v. 1 and v. 2) may be found geographically. If, by artificial means or by natural causes,‡ *e.g.* by blasting or by an earthquake, a cleavage (a tunnel) is caused in the mountain ridge, which

* Probably after the great tribulation, Armageddon. See Zechariah xiv, 16.

† To be indicated on the map slide.

‡ Rev. xvi, 18.

supports Jerusalem, the difference between the level of the Mediterranean and that of the Dead Sea, will cause the waters of the former to run into the latter, just in the manner described, towards the east into the lower basin, fish will go with the sea water and keep alive in the less dense and less salt Mediterranean water, which will remain on the top of the denser and more briny Dead Sea water—in a stratum of water reaching from the present Dead Sea level up to a line touching the levels of En Gedi and En Eglaim (v. 10).

A glance at the map will give a skeleton outline of how such a transformation of the Dead Sea would establish favourable conditions for a large hydro-electric plant, which is one of the vital conditions for a modern nation in a country without coal. Such a plant would mean light, heat and power, energy concentrated, and in practically speaking unlimited quantities.

By allowing a thinner film of the sea water, but of great breadth, to trickle down the sun-heated rocks, the water, as is shown in the map, would deposit its salts on the banks of the Dead Sea ; thus would result the largest natural automatic saline in the world—fulfilling the prophecy of our v. 11, “the miry places thereof . . . shall be given to salt.”

V. 12 describes the Jordan Valley which is to produce the food necessary for the inhabitants of the Millennial Kingdom.*

When the country was still flowing with milk and honey the mountains and hills above the rivers and the wâdis were covered with huge forests,† which absorbed the waters of the rainy season, only to let them run down gradually over the plain again. The present scheme includes the damming of the more important wâdis among the hills and mountains as shown in the map. The lower country below the dams will then be irrigated by ordinary watering until in time the mountain slopes might be clothed again in the evergreen mantle of majestic cedars.‡ “On that day” the day of the Lord when He “will raise up the tabernacle of David that is fallen” (Amos ix, 11) the day which, to judge from all signs of the times, is “at hand.”

* See Isaiah lxxv.

† Cp. note p. 5.

‡ Isa. 14, 18-20.

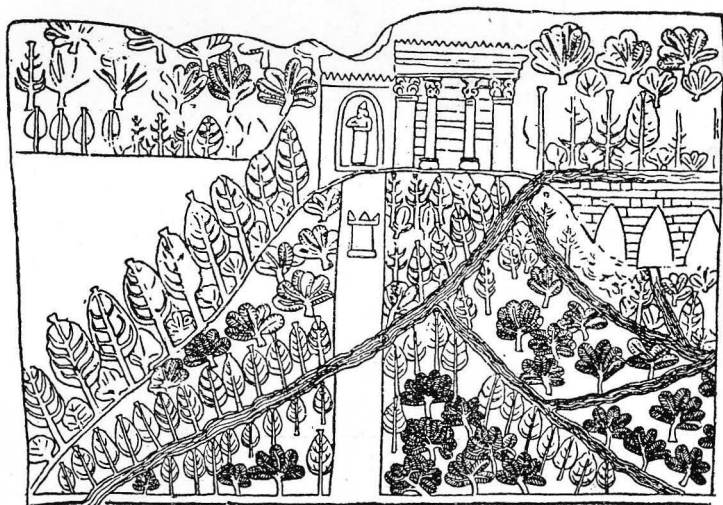


Fig. 1.

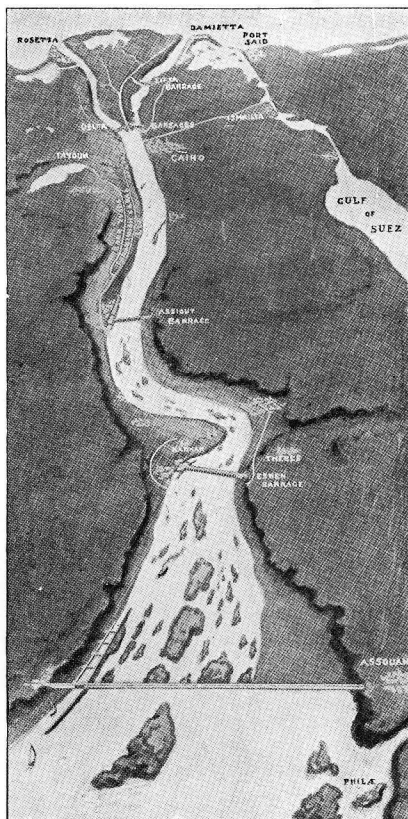


Fig. 2.

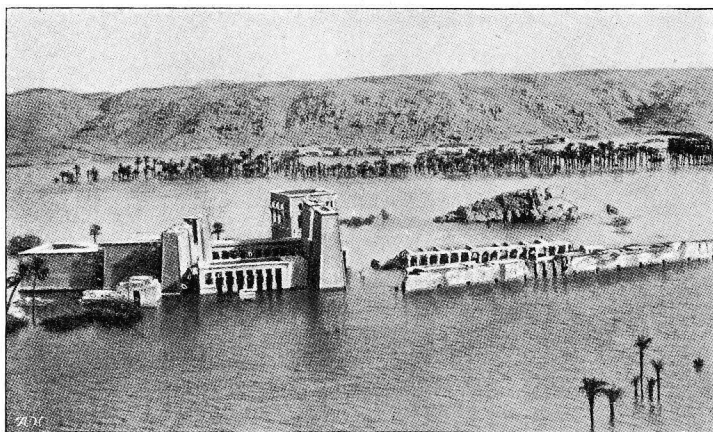


Fig. 3.

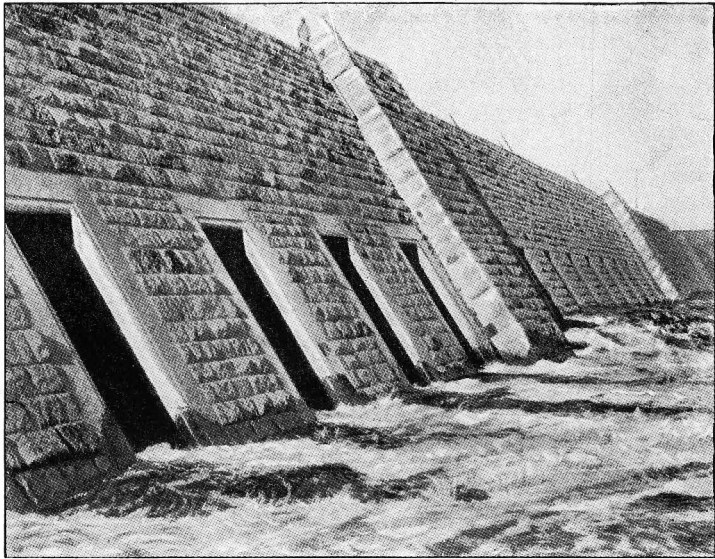


Fig. 4.

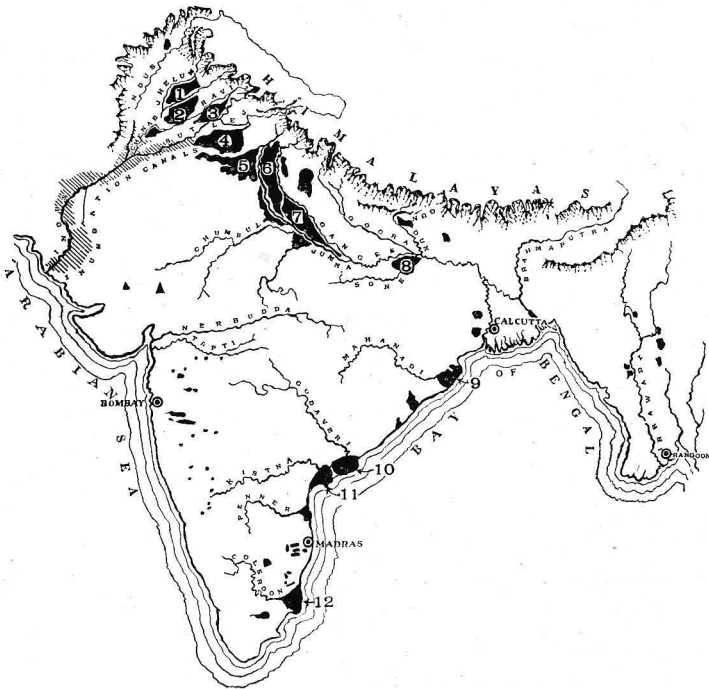


Fig. 5.

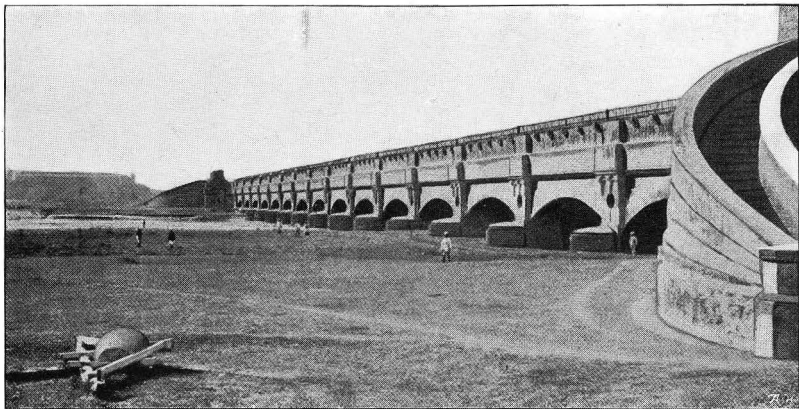


Fig. 6.

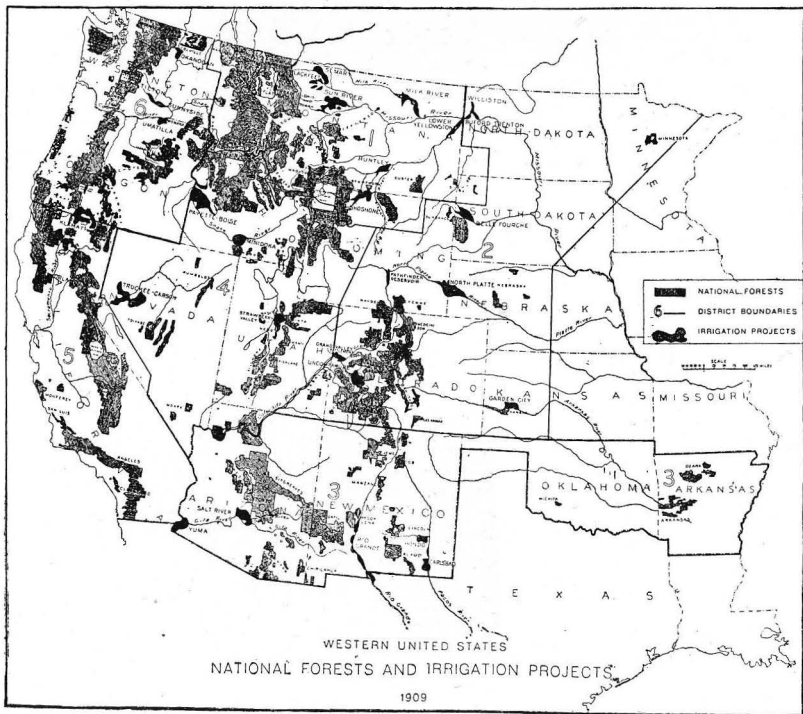


Fig. 7.

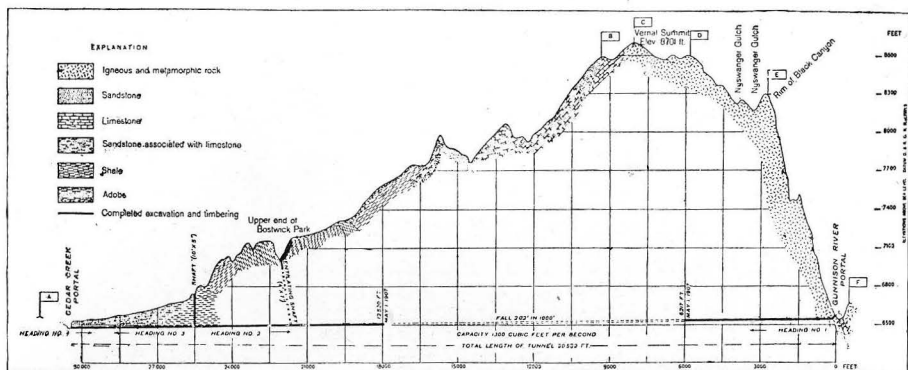


Fig. 8.

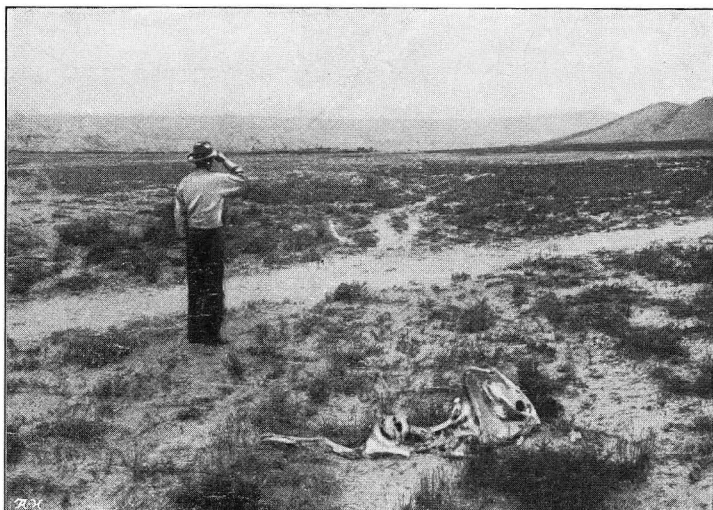


Fig. 9.



Fig. 10.

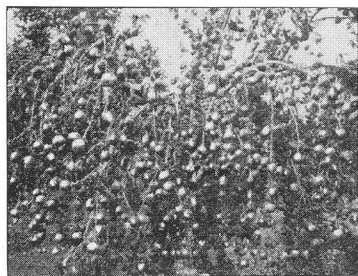


Fig. 11.

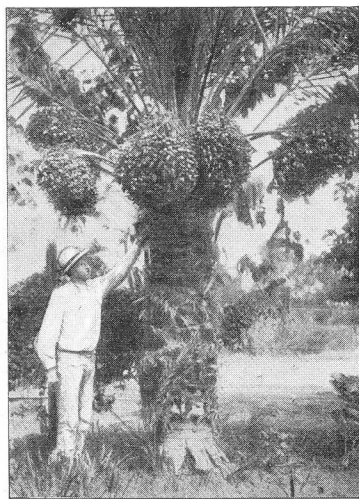


Fig. 12.



Fig. 13.

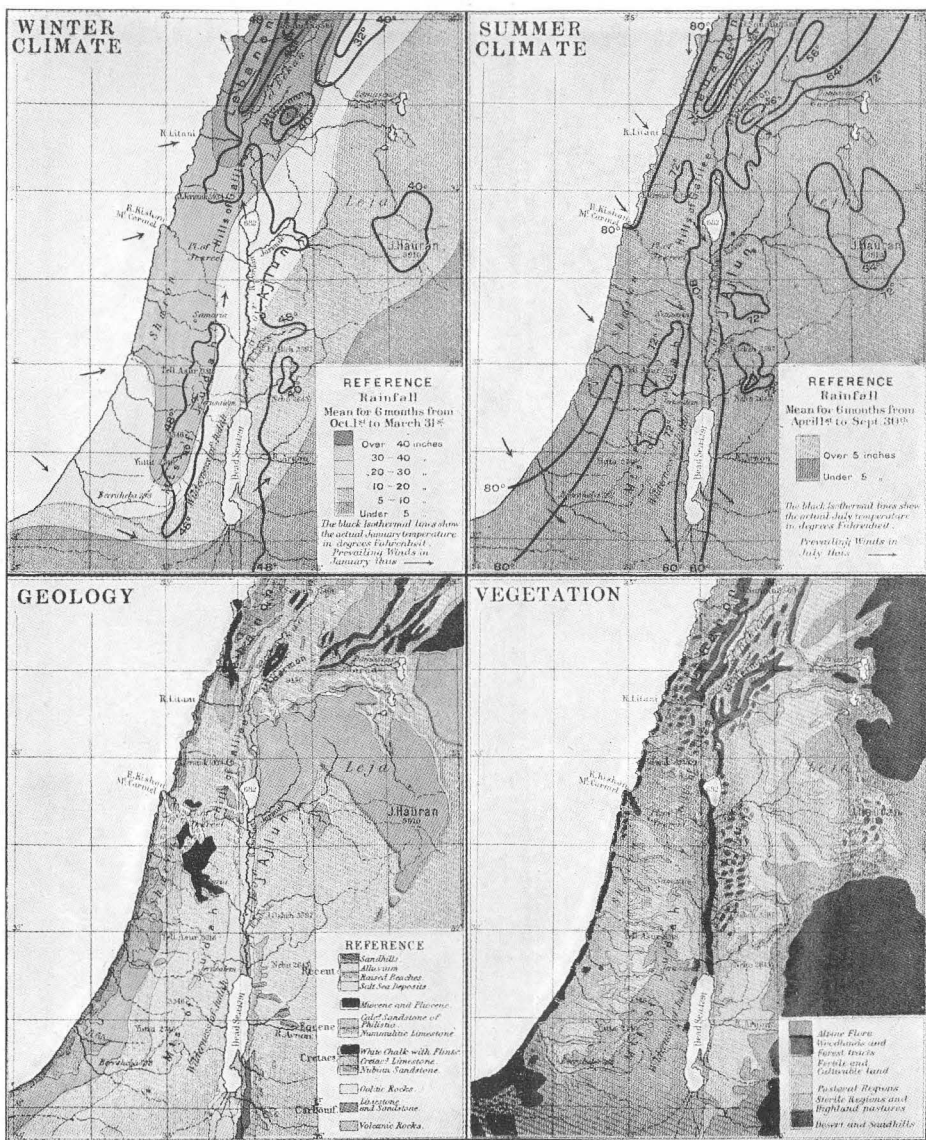
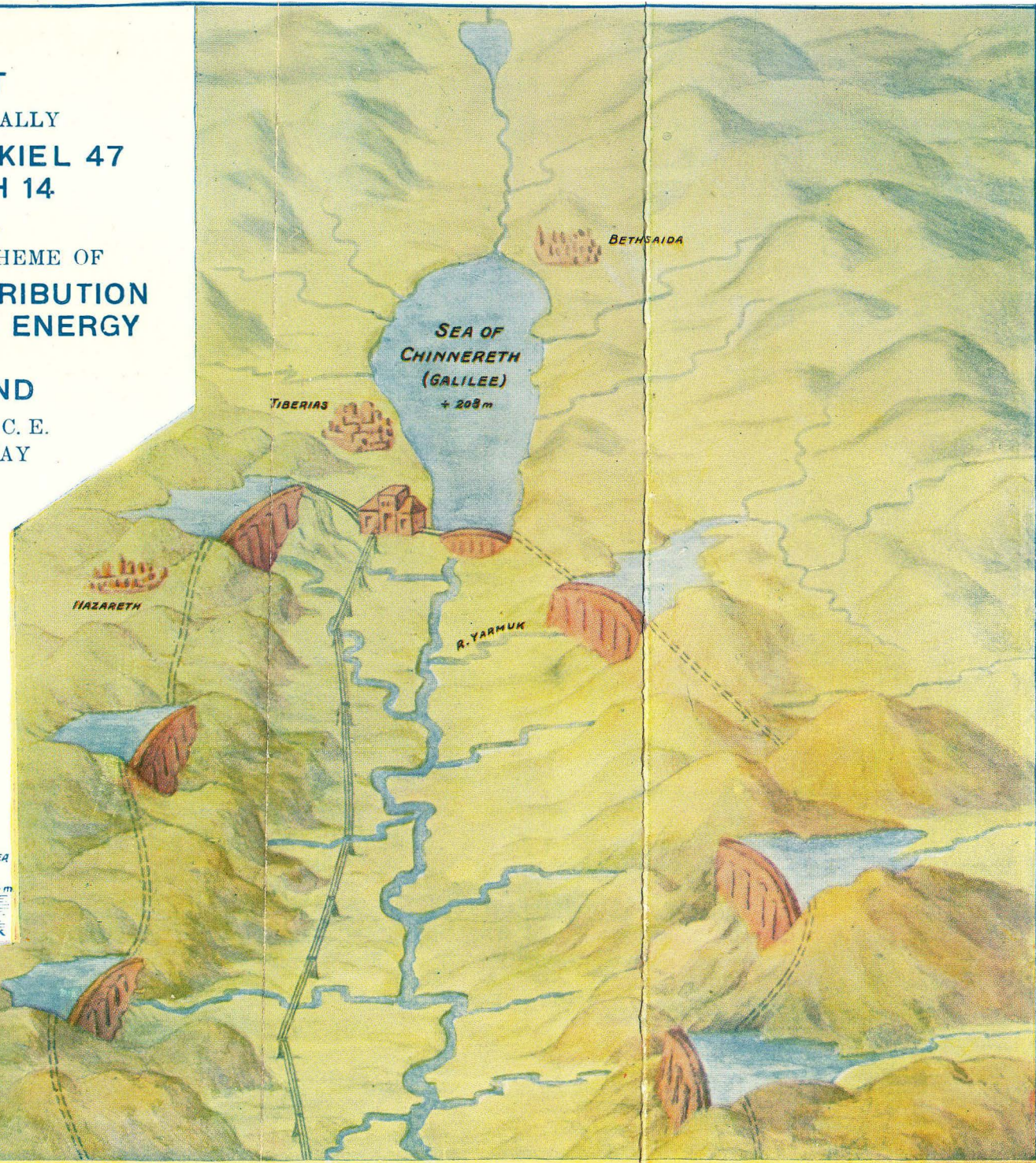
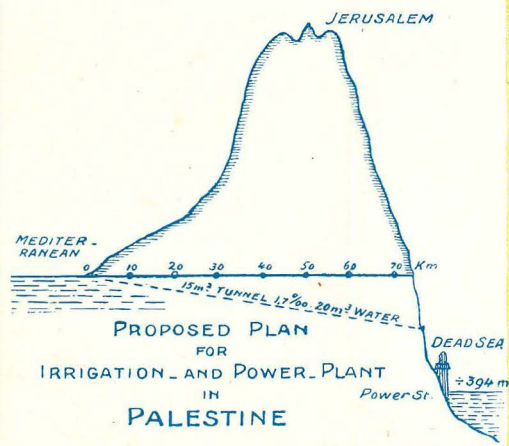


Fig. 14.

AN ATTEMPT
TO RECORD GRAPHICALLY
THE VISIONS OF **EZEKIEL 47**
AND **ZECHARIAH 14**
AS TO
THEIR PRESUMPTIVE SCHEME OF
IRRIGATION AND DISTRIBUTION
OF **HYDRO-ELECTRIC ENERGY**
IN
THE HOLY LAND
BY ALBERT HIORTH C. E.
KRISTIANIA, NORWAY





CHECHEM

R. JORDAN

JERICHO

JERUSALEM

B. KIDRON

DEAD SEA
÷ 394 m

Power Station

Alt. Engelb. 1918.

DISCUSSION.

The CHAIRMAN, after expressing great regret at the absence of the author, and thanks to Colonel Biddulph, said that the lecture was in two parts, viz., the great benefits already experienced in many parts of the world by irrigation, and the prophetic possibilities indicated in respect of Palestine.

As regards the former, special reference had been made to India where the great irrigation canals, especially in the northern provinces of that land, were among the most important monuments of British administration. The author stated that the revenue produced by them was 7 per cent., a figure which he (the speaker) thought must be below the mark, for when he left India 19 years ago it was 11 per cent., and in some canals was as much as 20 per cent., and was annually increasing. This revenue, it must be remembered, was the difference in the land assessment of irrigated land and the same land prior to irrigation. It did not take into account the actual value of the produce, and that, in some cases, was enormous. Thus on one canal in the Punjab, of which he knew, the value of the crops in one year, from land where prior to irrigation there were no crops at all, was more than the entire capital expenditure on the canal, so that it might well be said that that canal paid over 100 per cent. But this was not the only advantage conferred. There was the great additional security afforded against famine, there was the possibility of extra employment to masses of labour, and the planting out of colonies of healthy agricultural people, all of which were collateral to well-prepared schemes of irrigation. The lecturer had alluded to the social changes produced in the case of the Swat River Canal. This scheme was devised by a wise and far-seeing governor of the Punjab, Sir Henry Durand, who saw the possibility of converting a barren area of otherwise fertile soil (which in his day was a battle ground of turbulent tribes on either side of the British frontier) into a productive tract, and, by inducing the tribesmen to turn their weapons into agricultural implements, to bring peace into the community. It is exactly 45 years since the work was begun by three English engineers, of whom he (the speaker) was now the sole survivor. The work, though somewhat dangerous, was extraordinarily interesting, not only because of the engineering problems involved, and they were many, but because it was the only case

in the Punjab of a canal being taken from a river, along the base of adjacent hills, and across the natural drainage from those hills. Usually canals are taken on the watershed between two rivers, with distributary channels radiating on either side, like the veins on the leaf of a tree such as an oak or beech. The distribution system of the Swat River Canal resembles in its traversing natural drainage what is proposed by the author in his paper for canals on either side of the Jordan. The work on the Swat River Canal, begun in 1878, was completed some few years later, but he (the speaker) left it to go on active service in 1879 and did not return for some 22 years. What a change! Instead of a barren plain with thorns and briars, there were acres upon acres of wheat and barley, peaceful villages all over the area, shady roads instead of dusty tracks, a complete transformation. He thanked God that he had been permitted to have even a small share in so splendid a result and to see it with his own eyes, it was well worth all the difficulty and hard work. It must, however, be remembered that, whether in Palestine or elsewhere, such results can only be achieved if there is a vast quantity of water always available. In Northern India the resources of the Himalayas with their melting snows are available just at the very time the country is parched and ready for sowing. What the quantity is may be judged from one canal on which he was engaged (and that by no means the largest) where the discharge was equal to all the needs of eight cities each as large as London with its 6 million inhabitants, and the combined waters of the Punjab canals discharge more than the entire industrial needs of France, Germany and Austria put together.

One has to bear these facts in mind in considering the possibilities of such work in Palestine. The feasibility of irrigation depends primarily on the rainfall in the Lebanon. There may be floods in the many tributaries of the Jordan, but unless the flow is perennial, it would be useless to construct dams in the gorges to catch the flood water, as apparently is contemplated in the author's scheme. From the examination of the levels of the country it appeared to him (the speaker) that the most suitable place for irrigation was on either bank of the Jordan south of the Lake of Galilee. That lake affords a valuable natural reservoir, and with regulating works at the south end could be made to control irrigation channels on either bank, which would doubtless command a considerable area, though

it is evident that the works would be costly, as the lines cross the natural drainage. The water thus taken for irrigation would never reach the Dead Sea, and this would mean a serious diminution of level, unless, as the author proposes, the loss be made good by a tunnel or pipe line from the Mediterranean. The very unique conditions of level make this possible, and the fall in the pipe would enable a power station to be constructed somewhere near Jericho. Whether this would have the effect of enabling sea water fish to live in the Dead Sea is, however, doubtful. The remarkable passages of Scripture quoted may possibly refer to some such work as this, and in any case indicate a state of things which is certainly different from the present barren and desolate conditions, though assuredly not unlike the improvements already achieved elsewhere and alluded to above. The remarkable position of Palestine, close to the trade routes of the world and centrally situated in the continents, is not without deep significance, and this, combined with its unique topography, show that under the millennial kingdom of Christ, to which all Scripture points, the physical development of the land may be a factor of immense importance to the world. He thought that whether they agreed or not with the lecturer they owed him a debt of gratitude for calling attention to so interesting a subject.

The Rev. ARTHUR H. FINN said :—Having lived in South Palestine as a child and revisited the Holy City last year, I have some personal knowledge of the country. In addition, my father and mother resided in the Holy Land for over 17 years, thereby gaining a familiarity with its capabilities seldom attained by Europeans, and, of course, I have learned much from them.

I can heartily endorse all that was said about the wonderful fertility of the soil. I well remember the luxuriant fruit gardens in the valley of Urtas, near Solomon's Pools, the orange groves at Jaffa, and the abundance of excellent fruit—grapes, figs, apricots, peaches, pomegranates, melons, mulberries and almonds—at the right season. Olive trees too abound, though whole groves of them were mercilessly cut down by the Turks in the late war. On my late visit, also, I had glimpses of the flourishing lemon, orange and pomegranate orchards at the Jewish colony of Rehoboth on the Philistine Plain. My father used to speak of the amazing wheat crops in that same Philistine country where even now the peasants

count on reaping an hundred-fold. During his tenure of office as British Consul for the whole country, my father was able to do a good deal towards encouraging cultivation, and among other things promoted the growth of cotton in the Jordan Valley, and introduced eucalyptus trees for counteracting malaria.

With Dr. Masterman, I greatly doubt the practicability of Mr. Hiorth's scheme of a sea-water tunnel from the Mediterranean to the Dead Sea, nor am I inclined to think that it would effect the beneficent changes Mr. Hiorth anticipates. Certainly I cannot agree it would at all correspond to the prophetic visions of a cleaving of the Mount of Olives, and of the issuing from the Temple of a river becoming too wide to be crossed, and with an abundance of fruit-bearing trees on either bank. Only Divine power can bring about these stupendous changes.

No doubt a good deal may be done towards fertilizing the Jordan Valley by judicious use of the waters of that river and its tributary streams. But for the greater part of the country I believe the chief *need is the renewal of forests to attract a greater rainfall*. I know of no authority for supposing that cedars did or would flourish except in the Lebanon, but there are other trees of large growth that would do well, such as the evergreen oak and the terebinth, as witness the great oak which grew at Hebron and the terebinth which used to stand by the Mammilla Pool, near Jerusalem. Probably too, other varieties suitable to the country and climate might be introduced. It is important to remember that, small as Palestine is, it has a wide range of climatic conditions, from the perpetual snows of Lebanon to the tropical heat of the Jordan Valley.

Though irrigation is needed for fruit and vegetable culture, the staple products of corn, wine and oil do not require an abundant rainfall, the winter rains and the heavy dews being sufficient for these. There is, however, need for a larger population, especially of those who would use more intelligent methods of cultivation, than the ignorant and custom-bound fellahheen.

Lieut.-Colonel F. A. MOLONY said :—I am sorry that the paper refers so much to unfulfilled prophecy. I believe in the inspiration of prophecy, as I trust that the paper I read here proves. But it seems to me that the apologetic value of any prophecy is discounted if there be *any* suspicion that it has been fulfilled on purpose. When

the prophecies referred to come true, this suspicion will arise, and will be increased by the fact of this paper having been read—especially if, as I think probable, the undertakings are not at first a financial success.

So let us look at the paper from a strictly business standpoint. The proposals fall into two parts. A fresh-water irrigation scheme, and a salt-water electric power scheme. I suggest that the first may prosper without the second, and should precede it; for I take it that, if heavy crops are raised in the Jordan Valley, they can be transported over the short distance to the Mediterranean. There is already one railway available.

I should much like to hear of a dam being successfully built at the lower end of the Sea of Galilee. It would greatly add to the defensibility of Palestine against an attack from the east, as it would allow of a flood being sent down the Jordan at short notice. But will the Christian public allow such a dam to be built, seeing that it will involve the submergence of the sites where most of our Lord's ministry was carried on! The public will surely want to be sure that it is absolutely necessary. Will not a dam at the lower end of the waters of Merom suffice to store up the winter rains for summer use? How high is the proposed dam at the lower end of the sea of Galilee to be, and what will it submerge?

If the public agree to it, then let it be built, and *one* Jordan canal. If *that* pays, and leaves water available, then dig the second.

But why are the smaller reservoirs shown on the *very line* of the canals? It does not look as though they could be emptied *into* the canals. Surely they ought to be further up their respective valleys? It looks from the birdseye view as if electricity was to be generated at the Dead Sea, and sent to the lower end of the Lake of Galilee, and there used to pump up water to a high level canal; or is the western canal to run towards the Sea of Galilee and there be used to generate electricity?

The paper suggests that the fresh water entering the Dead Sea should be lessened by its being spread over the ground, and replaced by salt water from the Mediterranean, which the author believes will float on the top of the denser salt water, and support fish. But why does not the fresh water of the Jordan do so? To replace the fresh water with salt, does not seem a likely way to decrease the salinity of the Dead Sea.

Lieut.-Colonel G. MACKINLEY writes :—" Our lecturer has brought before us grand schemes which appear to be quite practical and likely to be profitable if confidence and capital can be secured. The present condition of Palestine, protected, as it now is, by the power of England, appears to hold out good hopes that his plans may materialize before long. It also appears as if the schemes harmonize with the prophecies which Mr. Hiorth has quoted, though he warns us that perfect clearness has not yet been revealed. (From Zech. xiv, 8, it would appear that natural rivers will have their sources near Jerusalem, one flowing to the Mediterranean, the other to the Dead Sea ; this could not refer to any work done by man, but it could be effected by an earthquake or other natural convulsions.)

I should be glad if our lecturer would inform us if there is a corresponding deep depression in Africa to the south, in the line of the Dead Sea and the Gulf of Akaba. If there is such a lake in Africa, would it be possible to irrigate the land near it and to obtain water power in a manner similar to that which Mr. Hiorth proposes for the Jordan Valley ? "

Rev. E. P. CACHEMAILLE, M.A., said :—Mr. Hiorth, in his very interesting paper, has rightly referred to the prophecies of Ezekiel and Zechariah, describing the physical changes that Almighty God will bring about in those lands. But there is much more in these prophecies than has been brought forward, and it will be interesting to the members to have a brief summary which they can verify for themselves by looking up the references.

It is essential at the outset to bear in mind the distinction between the " Promised Land " and the " Holy Land." The land promised to Abraham and his seed is vastly more extensive than the small western portion of it, which we know as the Holy Land of Palestine. The Promised Land reaches west to east, some 500 miles from the Mediterranean to the River Euphrates ; southward its dimensions are not so clearly defined. In Solomon's time it acknowledged him as overlord, but it has never been actually settled or occupied by the people of Israel. The greater part of this area is desert for lack of water, but it is the most centrally situated territory in the world, being in contact with three continents and commanding the Eastern and Western Oceans.

The smaller portion, Palestine, will suffice at first for the restored People of Israel; but as they multiply and expand, abundant provision is made for the increased settlement of the population, in the Twelve County Divisions that run parallel to each other across the present desert to the Euphrates. (Ezek. xlvii, 13—xlviii.)

Ezekiel, in captivity at the River Chebar, is taken in vision to the Land of Israel, and is set down upon a very high mountain in that land, on the southern slope of which is a great sanctuary surrounded by an enclosure so large that it has the appearance of a city but it is a great Temple with its Courts and Precincts. (Ezek. xl.)

Ezekiel is shown a stream of running water flowing east from the sanctuary to a great distance. At first it is only a small stream, but it becomes a great river, which implies that it is receiving many tributaries. (Ezek. xlvii, 1; Joel iii, 18.) Also from the new city, which is Jerusalem, rebuilt and called by a new name (Ezek. xlviii, 35), and stands some ten miles further north than present Jerusalem, two rivers flow, one to east and the other to the Mediterranean west, the city standing on the watershed. (Zech. xiv, 8.) So there are mentioned three new rivers, two going east toward the wilderness, and one west to the Mediterranean.

To set these rivers running implies a total change in the physical features of the land. Water won't flow up hill. How comes this about? When the Lord's feet stand on the Mount of Olives (Zech. xiv, 4) the Mount cleaves asunder, half to north and half to south, leaving a great valley west to east between. This is part of a mighty convulsion (Ezek. xxxviii, 19, 20) that will upheave the whole land, and make it like the Arabah (Zech. xiv, 10), that great desert plateau south of the Dead Sea, extending to the Gulf of Akabah. This great upheaval, which could not well be instantaneous, will raise the very lofty mountain of the Lord's House, and its summit, being in perpetual snow, will abundantly supply the river that runs from the sanctuary eastward, through the wilderness. There will be other mountains also, though not so high. (Isai. ii, 2; Mic. iv, 1-3; Joel iii, 18.)

Jordan Valley is geologically a fault or crack in the strata, the Mediterranean side of which has sunk much lower than the other, leaving the mountains of Moab standing high above. All that Valley is to be raised to the same general level as the Arabah, so as to carry on the watershed from the future high land on the west,

and from the lofty mountain of the Lord's House, across into the Syrian and Arabian deserts. The raising of the land will alter the climate and the new rivers will make the wilderness literally to blossom as the rose.

Mr. THEODORE ROBERTS expressed the Institute's indebtedness to Mr. Hiorth for his suggestive paper. With reference to the map showing Palestine as the centre of the land system of the world, he pointed out that it was also the centre of navigation, the long arm of the Red Sea giving access from the thickly populated countries of India, China and East Africa, while the Mediterranean gives a similar access from the greater part of Europe, our own land and Western Africa, as well as the two great continents of America. All this was interesting in view of the prophecy that the nations were to come up to Jerusalem to worship in the millennial day (Zechariah, xiv, 16).

He referred to the prophecy of Ezekiel, xlvi, 22, 23, that strangers were to be incorporated in Israel, which led, no doubt, to the favour with which the Jews of our Lord's time regarded proselytes, who thus became the nucleus of the Christian Church which ultimately consisted mainly of Gentiles.

He thought that much prophecy had both an immediate partial, and an ultimate complete, fulfilment, as well as a present spiritual interpretation, just as our Lord's feeding of the multitude was actual, as well as typical of His whole ministry. So Ezekiel's prophecy might be literally fulfilled, as the lecturer had indicated, as well as have a spiritual meaning in the River of Grace with the trees typifying those who were exponents of that Grace. The connection of the River and the Trees in Isaiah, xli, 17-20, and Ezekiel, xlvi, 7, 12, showed that the prophetic word contemplated both irrigation and afforestation.

Dr. E. W. G. MASTERMAN, Hon. Sec. of the Palestine Exploration Fund, then said:—I venture to make a few remarks on this paper but must be very brief as the hour is late. I have made a special study of the Dead Sea region and the Jordan Valley and have been long familiar with the proposals of the writer of this paper, which were put forward some years ago. The proposals fall into two headings as the Chairman has remarked—firstly, those relating to

irrigation of the Jordan Valley, and secondly, the proposal to make a tunnel from the Mediterranean, under Jerusalem, into that Valley. Regarding the first, whatever may be decided regarding detail, some such irrigation scheme is sure to come about. At present the concession is in the hands of a Mr. Rutenburg, who intends, by using the Lake of Galilee as a reservoir in the drier season, to install machinery for the utilization of water-power, as well as to construct irrigation canals. But it must always be remembered that the Jordan is not a large river and in the summer months runs very low. The proposal to use the water itself to any great extent outside the actual valley is of very doubtful validity, and to suppose, as has been suggested, that water could be pumped up the 3,000 or 4,000 feet on to the Eastern Plateau, is quite impracticable. With respect to the second plan there are far more serious objections. Whoever is going to subscribe £15,000,000 to make such a canal? The whole plan is contradictory. If the Mediterranean waters are to evaporate and produce salt as they travel down towards the Dead Sea, how can they "heal" the waters of the Dead Sea? To so dilute the waters of the Dead Sea, especially with sea water, as to enable them to support fish life, would involve filling up the Jordan Valley at least as far north as the Lake of Galilee. The whole plan is grotesque. The writer too makes some false assumptions. The seasonal variation of the Dead Sea is not, as was stated many years ago, on mere guess work, 16 feet, but, as I have proved by 10 years' careful measurement, made on behalf of the Palestine Exploration Fund, from one and a half to three feet. With regard to the population of Palestine in ancient times the figures quoted are quite impossible. A careful examination of the land shows that these ancient "cities" were very small. Much has been made of ruined sites, but many of these are extremely small and are not very ancient. Probably in the days of David and Solomon the population of Palestine was much less than it is to-day, and even in the New Testament times all the evidence of archæology is against the extravagant figures given by Josephus, who may have been a good historian but was a thorough oriental where numbers are concerned. The writer of the paper suggests that cedars grow in Palestine, of this there is not the slightest evidence. All the historical references mention the Lebanon and not Palestine as the site of great cedar forests. Indeed of the existence

of forests of great trees, as contrasted with thickets or moderate sized woods, there is no evidence at all. The total rainfall of Palestine* does not average "about 40 inches per annum." In the higher mountain region the mean is about 26-27 inches, in the plains less, and in the Jordan Valley very much less. Probably the mean rainfall on the whole surface of Western Palestine is well under 15 inches. No one who has passed even one year in Palestine could possibly describe the "remaining nine months of the year" as having a sky "practically cloudless." Rain falls off and on for quite six months and March is at times the wettest month. During all the late months of summer heavy banks of clouds pass across the sky to the great mitigation of the climate.

It may be of interest to some present to know that at certain spots near the mouth of the Jordan and where springs flow into the lake, a few small fish may be seen at times swimming about, but they cannot live at all in the undiluted Dead Sea water.

Mrs. STRUTT said :—It is a great pity that a concession of such a far-reaching character should have been granted to a Russian Jew, to the exclusion of other Nationalists. So far nothing appears to have been done. I was informed he had gone to New York to endeavour to raise £200,000, but was not successful. Any concession to do any good would require 10 times that amount, and different undertakings should be granted to different pioneers, and so give as much employment as possible.

AUTHOR'S REPLY.

I beg to express my thanks to the gentlemen who honoured me by discussing this paper, and for the kind criticism and valuable fresh thoughts and suggestions.

I quite agree with the Chairman, as to the most convenient places for the irrigation; but in my plan the water from the canals was never expected to reach the Dead Sea—being exclusively reserved for the irrigation (p. 138, 2nd para.; p. 140, 5th para.).

Mr. Finn says that "only Divine power can bring about these stupendous changes." As pointed out (p. 143, last para.) an earthquake might be the material means for creating the "tunnel."

* These remarks about the rainfall have been added as the speaker had not time to finish.

Lieut.-Colonel F. A. Molony: The slight raising contemplated of the actual level of the Sea of Galilee (and a corresponding *lowering* of the actual lowest ebb) will drain a very considerable volume of water to the canals, without submerging any *city of arable lands*. In each of the tributaries several dams should be built at suitable places, one above the other, in order to avoid pumping and thus utilizing as far as possible gravitation, the cheapest of means for distribution of the water (p. 138, para. 1).

The lowest of these reservoirs could be united by the canals (shown in dotted lines on the map).

Lieut.-Colonel G. Mackinlay: The said African depression does exist.

A power-scheme like the one suggested by the speaker will in all cases really depend upon the cost of the power generated, the length of the tunnel and the depth of the depression, also the eventual use of the power on the spot will have to be considered.

The Rev. E. P. Cachemaille: I beg to thank the hon. speaker, from whose books I have derived so much biblical knowledge, for his most instructive suggestions.

I heartily agree with Mr. Theodore Roberts in believing fulfilment of Prophecy (Biblical) as both past, present and future.

In lectures I demonstrate this graphically by moving the white screen *from* the lantern towards the opposite wall, every epoch in *history* can thus be shown its own particular fulfilment, until in *focus* the *final*, complete—*future*—picture appears, leaving all the preliminary, then *historic*, pictures as imperfect, indistinct, partly only visible ones from the past.

Up to the present day *historical*, I must be "Futurist" as regards future, but allowing no "gap."

I quite agree with Doctor Masterman, that the pumping of water up some 3-4,000 feet is absolutely impracticable, and I never did contemplate such curious and lofty plans, of course; that very idea is to be credited to my learned opponent.

As to the funds to be raised, be it even millions of pounds, I never doubted the possibility of raising the same, as the Owner of The Land and The Lord of The People, yea, The real Owner of the wealth of all peoples, certainly will know how to find the funds for carrying out His Purposes (Exodus xii, 35, 36).

(Three years ago the press informed us that Baron Rothschild had given half of his fortune to the Colonization of Palestine.)

As to the variation of the level of the Dead Sea, I expressly stated that the different authors did not agree (p. 139, para. 1), and, as none of the authors I have consulted have devoted ten years to "careful measurement" of that waterline (entirely unimportant in this question), I will thankfully adopt the esteemed speaker's figures.

My figures as to the ancient population, are—I am sorry to see—deemed "quite impossible."

To believers in the Holy Scriptures, I venture to quote one or two passages, viz.: 1 Chron., xxi, 5, and 2 Sam., xxiv, 9, where we are told of nearly *one and a half million* "men that drew sword." Any member of this Institute may from this figure easily approximately compute the *total number* of inhabitants.

"A number, probably much less than it is to-day"—as the learned doctor says—will thus hardly do. From a newspaper cutting I see that Sir Alfred Mond expects the land to receive some 3-4 *million* people, when the plans for the restoration are ready.

Some seventy O.T. passages mention *cedars* as known in Palestine in olden days, that cedars *will be planted and grow there in future* is revealed to the believer in the Bible in Isa. xli, 18-20:—

"I will open rivers in high places, and fountains in the midst of the valleys, I will make the wilderness a pool of water, and the dry land springs of water, *I will plant in the wilderness the cedar . . .*"

On p. 136, para. 9, the *average rainfall in the highlands* is given, according to the official maps and figures, only these districts—capable of supplying surplus water for the irrigation—being here of any consequence.

In Wm. Smith's *Dictionary of the Bible*, one passage runs thus: "Between April and November there is, *with the rarest exceptions*, an uninterrupted succession of fine weather, and skies without a cloud" (p. 693, Art. "Palestine"). (Italics mine.)

My learned opponent denounces the plan here presented as impossible and contradictory, and even employs the epithet "grotesque." The Doctor cannot see how the waters of the Dead Sea can be "healed" and *simultaneously* salt be produced. Admittedly, to the observer in general, it may seem extremely complicated, that *one part* of the water evaporates—leaving salt—before reaching the level of the Dead Sea, *another part* of the water flows through the turbine tubes,

developing energy *and* healing the saturated waters of the Dead Sea ; the scientifically trained technical mind will more easily understand this from the explanation and a brief glance at the coloured map.

As my personal knowledge and experience of water-power perhaps may be deemed somewhat limited as compared to that of the Doctor (as co-owner and member of boards of companies controlling a little above one million horse-power in Scandinavia and in Iceland, I got part of my practical training in this matter), I venture to quote the opinion of another member of this Society, quite a well-known scientist, fellow-countryman of mine, Dr. Fridtjof Nansen, Professor of Oceanography (G.C.V.O., D.Sc., LL.D., etc., etc.), who said in his letter of November 15th, 1913: "I beg to thank you very much for your kindness in sending me your grand plan of a tunnel through the land between the Mediterranean and the Dead Sea, which I have read with great interest."

Dr. Nansen at that time refrained from expressing an opinion as to the feasibility of the plan (he declared himself incapable of so doing), but *regarding this special* question I asked—and received—the opinion of another gentleman, whose scientific ability and authority may perhaps safely be said to approach very closely to that of my esteemed opponent, *viz.*, *Sir William Crookes* (F.R.S., etc., etc.), who wrote in his letter of September 27th, 1913 (submitted in original to the Victoria Institute), regarding the plan here described: "I have read your scheme of obtaining water power by means of a tunnel from the ocean to the Dead Sea, and utilizing the power so obtained in the production of electricity. The idea seems to be a thoroughly feasible one, and I will not fail to mention it to any of my friends to whom I think it will appeal."