

# Theology on the Web.org.uk

*Making Biblical Scholarship Accessible*

This document was supplied for free educational purposes. Unless it is in the public domain, it may not be sold for profit or hosted on a webserver without the permission of the copyright holder.

If you find it of help to you and would like to support the ministry of Theology on the Web, please consider using the links below:



Buy me a coffee

<https://www.buymeacoffee.com/theology>



PATREON

<https://patreon.com/theologyontheweb>

**PayPal**

<https://paypal.me/robbradshaw>

---

A table of contents for *Journal of the Transactions of the Victoria Institute* can be found here:

[https://biblicalstudies.org.uk/articles\\_jtvi-01.php](https://biblicalstudies.org.uk/articles_jtvi-01.php)

## 790TH ORDINARY GENERAL MEETING

HELD IN COMMITTEE ROOM B, THE CENTRAL HALL,  
WESTMINSTER, S.W.1, ON MONDAY, APRIL 29TH, 1935,  
AT 5.30 P.M.

MISS A. MILDRED CABLE, F.R.G.S., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed, and the HON. SECRETARY announced the election of Captain B. Alexander as a Member.

The CHAIRMAN then called on Mr. George H. T. Kimble, M.A., F.R.G.S., to read his paper entitled "The Expanse of the Earth as Known in Old Testament Times."

---

### *THE EXPANSE OF THE EARTH AS KNOWN IN OLD TESTAMENT TIMES.*

By GEORGE H. T. KIMBLE, M.A., F.R.G.S.

**H**OWEVER negligible the trade of a community may be, however poor its knowledge of material things, however remote from the main cultural centres, it cannot fail to be aware of, and in greater or lesser measure interested in, the surrounding world. If its people are valley dwellers, following a settled habit of life, they are interested in the behaviour of the river which fertilizes their valley: in the cause of its regimen and in the location of its fountain. After all, asked the Egyptians, why should the Nile overflow its banks every summer, just when the land is languishing under a burning sun? If its people are islanders, they cannot help speculating as to where the sea begins and where it ends and why it is always in motion. Was it, as Homer and many another asked, part of a mighty river that was always flowing back upon itself,\* or merely a large pond? As if to encourage such questionings, traders would come to their shores and tell of other lands, beyond their ken,

---

\* *Odyssey*, xx, 63-5.

inhabited by people of a different skin who worship in temples of unheard of magnificence and traffic in rare merchandise. Many thought these travellers' tales incredible, for who had ever heard of trees guarded by winged serpents? or lakes infested by bats so large that those who went near to gather perfume had to wrap themselves in ox-hide? and how could there possibly be men with dogs' heads and others with heads in their chests?

Whether these tales were true or false, it was impossible to doubt the existence of a wider world when traders produced material evidence of it in the form of new metals and precious stones, spices, and strangely wrought wares.

In ways such as these, the earliest earth knowledge was acquired. It was, of course, a long time before such knowledge was rationalised and made common to the whole community, and longer still before it was mediated to other communities. "Common knowledge," indeed, was very scarce in the ancient world: thus the Egyptian "world" of the IVth Dynasty was the flood-plain of the Lower Nile, some 10-40 miles broad and some 500 miles long, together with the desert fringes. The Sumerian "world" of about the same period (c. 3000 B.C.) was the flood-plain of the Euphrates-Tigris system, together with adjacent parts of the Iranian Plateau and the Arabian Desert; beyond and completely surrounding it was the ocean! Clearly the two "worlds" had nothing in common.

It would be interesting to trace the expansion of the Egyptian and Sumerian horizons until they coalesced, but we have neither the time nor the data to pursue such an investigation. We know, however, that the expansion dates from a fairly remote time; desert caravans between Egypt and Babylonia were well established by Abraham's time,\* and it is apparent from the first chapters of Genesis that there was a quite considerable knowledge of the earth even earlier. Broadly speaking, this is its scope†:—reaching out in all directions from the cradle of civilization—the Fertile Crescent‡—it embraced, on the north, the Armenian mountains,§ the Anatolian Plateau including possibly

---

\* Cf. Gen. xxxvii, 25, 28.

† Gen. x.

‡ The well-watered lowlands of Mesopotamia, Assyria, and Palestine.

§ The Ashkenaz of Gen. x, 3. See A. H. Sayce: *Races of the Old Testament*, p. 78.

the southern shores of the Black Sea ;\* on the east, the mountains of Elam and Media and the Gulf of Oman ;† on the south, the Arabian shores of the Indian Ocean‡ and the Somali coast ;§ on the west, Ethiopia, the Libyan Desert to the west of the Nile and the Ægean Archipelago.||

But to assign limits to the known world of these early and inadequately recorded times is a formidable task. The information is so slight ; moreover, it is often spurious and hard of interpretation. A country had only to be beyond the horizon to be almost at “ the ends of the earth.” Directions and distances could not be computed with accuracy and accordingly the the location of a place was frequently the subject of debate. Further, many place-names have disappeared ; many more have become so modified with transliteration that their identification is guesswork : only a few have survived the centuries unimpaired. The problems of interpretation are well exemplified for us in portions of the early Biblical text ; take, for instance, the passage beginning : “ And a river went out of Eden to water the garden ; and from thence it was parted, and became into four heads. The name of the first is Pison : that is it which compasseth the whole land of Havilah where there is gold : and the gold of that land is good : there is bdellium and the onyx stone (=malachite). And the name of the second river is Gihon : the same is it that compasseth the whole land of Ethiopia (=Cush). And the name of the third river is Hiddekel (=Tigris) : that is it that goeth toward the east of (=eastward to) Assyria. And the fourth river is Euphrates.”¶ These verses are perplexing in more than one way ; firstly, from a hydrographical standpoint. Even if we accept Yahuda’s paraphrase of the words “ and became into four heads,” viz., “ and supplied the sources of four rivers,” we are not much nearer the answer, for there is no Mesopotamian stream that fulfils all the conditions. The Tigris and Euphrates, both of which are specified, do not have a common

---

\* The Gomer of Gen. x, 2. See A. H. Sayce, *Journal of Biblical Literature*, vol. xlv.

† Joktan and Ophir (Gen. x, 29). See below.

‡ Hazarmaveth (Gen. x, 26) = Hadramaut ?

§ The Phut of Gen. x, 6 = “ the land of Punt ” of the Egyptian Inscriptions ? See J. H. Breasted, *Ancient Records* : vol. ii, p. 248.

|| Dodanim (=Rodanim) Gen. x, 4 = Isle of Rhodes ? See below.

¶ Gen. ii, 10-14.

source, and certainly do not provide the source of a river which "compasseth the whole land of Cush." It may be that the writer believed in a subterranean connection between these rivers and the "river of Eden," a view that was widely held in the Middle Ages regarding the Egyptian Nile and the Nile of the Negroes (=Niger).\*

Then there is the problem of the identification of the rivers Gihon and Pison. This I propose to deal with at some length because of its bearing on our subject. Yahuda argues† that they were mentioned because they were, in the author's opinion, the most important rivers of Cush and Havilah, just as the other two, the Tigris and Euphrates, were the most important rivers of Assyria and Babylon; further, that these four rivers were selected because they were "situated at the opposite ends of the world and that in their compass the whole of the then known world would be comprised."‡ If this is so, we have a clue to the location of the Pison and Gihon, for since the Tigris and Euphrates lay well toward the northern and eastern extremities of the habitable earth, it is by no means impossible that they are to be sought in the southern and western extremities. In partial support of this we have the statement that the River Gihon flowed through Cush, which in the Bible, as in other early literature, invariably denotes Nubia or Ethiopia and which during the era of the New Kingdom in Egypt (*i.e.*, about the time of the Hebrew-Egyptian connection) was the "Ultima Thule" of the south. As Yahuda points out,§ the Nile suggests itself for Gihon. This same writer goes on to suggest that because the two Mesopotamian rivers "flow near to one another, framing, so to speak, the eastern (*sic*) part of the world, one may assume that similarly in the choice of the opposite pair of rivers, Pison and Gihon, the idea was dominant that they, too, flowed near to one another and delimited the extreme western (*sic*) part of the world. Pison would thus first have to be looked for in Egypt and its neighbourhood."||

Whether such an intention were in the mind of the author or not, we cannot tell, but even supposing that it were,

\* *E.g.*, Isidore: *Etymologia*, xiii, 21-7.

† *The Language of the Pentateuch in its Relation to Egyptian*, p. 171.

‡ *The Language of the Pentateuch in its Relation to Egyptian*, p. 171.

§ *Ibid.*, p. 172.

|| *Ibid.*, p. 172.

there is no justification for the conclusion that Pison must be sought in Egypt: the apposition, as a map will readily show, is not between east and west but rather between north and south, *i.e.*, between Assyria and Arabia rather than between Babylon and Egypt. Moreover, while it may be possible to locate Havilah in Egypt, as Yahuda does, on the ground that the three commodities (gold, bdellium, and malachite) mentioned in Gen. ii, 12 are found there, the tables in the tenth chapter of Genesis, if they have any geographical value, point to a different identification. There Havilah occurs twice: first in verse 7: "And the sons of Cush: Seba and Havilah and Sabtah and Raamah and Sabteca: and the sons of Raamah: Sheeba and Dedan." and again in verse 29: ". . . and Sheba and Ophir and Havilah and Jobab: all these were the sons of Joktan and their dwelling was from Mesha as thou goest toward Sephar, the mountain of the East." With the one possible exception of Cush (although even Cush admits of an Arabian identification\*), these names are generally accepted to signify Arabian rather than African localities. Joktan, for instance, is a direct transliteration of the Arabic word *Kahtan* appearing in the Persian Gulf peninsula of *El Kahtan*. *Sephar* is the ancient capital town of *Saphar* lying probably near the modern *Hafa* of south Arabia between *Ras Risut* and *Ras Mirbat*, surrounded by the *Gara* mountains.† *Raamah* is probably identical with the *Regma* described by some authors as a gulf in the Persian Gulf.‡ Now is there any evidence that Arabia produced the onyx, malachite, and gold? From very ancient times, central and south-eastern Arabia have been important sources of gold and there were at least ten fields all within easy reach of the north-south and east-west caravan routes.§ Nor is this region waterless: three rivers would satisfy the Genesis description of Pison that it "compasseth the whole land of Havilah," if Havilah is equated with the gold-producing region of the south-east. These are the *Wadi-er Rumma*, *Wadi Dawasir* and *Wadi Yabrin*. It is worthy of note, moreover, that Havilah in Gen. x, 29 is

\* A. H. Sayce: *Journal of Biblical Literature*, vol xliv, p. 202.

† W. H. Schoff: *The Periplus of the Erythraean Sea*, p. 140.

‡ D. S. Margoliouth: *Hastings' Dictionary of the Bible*.

§ W. H. Schoff: *The Ship Tyre; A Study in the Commerce of the Bible*, p. 22.

juxtaposed against Ophir which is now widely accepted\* as being a locality on or near the Oman coast, a view that tallies with one of the earliest eyewitness accounts of the commerce of that coast: "to Ommana frankincense is brought . . . Exports include dates, gold and slaves. Along the coast there is nothing but bdellium."† Additional support for this view is forthcoming in the Old Testament itself. According to II Chron. iii, 6, the gold that Solomon sent to Ophir for (*vide* II Chron. viii, 18) was "gold of Parvaim" *i.e.*, of Sak el Farwaim, near the Wadi-er Rumma and to the west of Rass. If it is the case, as Schoff opines,‡ that the Ophir voyages were undertaken in order to avoid the unsafe conditions on the caravan routes about the time of Solomon and that they were discontinued as soon as normal conditions in Arabia were resumed, then it is quite possible that the "good gold of Havilah" and the gold of Ophir are one.

Yahuda's case for the identification of Havilah with a region of Upper Egypt must be alluded to because, among other things, it illustrates the extraordinary divergence of opinion among scholars concerning Biblical place-names. Following up his theory that the implied apposition of east and west warrants the identification of Gihon and Pison with various parts of the Nile, he shows§ that the district lying between Assuan and Koptos (=modern Kufi) and the Red Sea was one of the richest sources of Egypt's gold—no fewer than three of the principal Egyptian goldfields, Koptos, Edfu, and Ombos being found there and all of them lying on the Nile. Malachite, he finds, was also produced in the same region|| and bdellium, an aromatic gum resin, is indigenous to that vicinity. From this he concludes that Pison is "that portion of the Nile which circumscribes the gold land of Upper Egypt."¶ This, in contradistinction to the Nubian Nile, he calls the Egyptian Nile which the Egyptians

---

\* *E.g.* E. Glaser: *Skizze d. Geschichte u. Geographie Arabiens*. W. H. Schoff: *loc. cit.*, p. 5. W. Carey and E. H. Warrington: *Ancient Explorers*.

† *Periplus of the Erythraean Sea*, §36. (Schoff's edition.)

‡ *The Ship Tyre*, p. 34.

§ *The Language of the Pentateuch in its Relation to Egyptian*, p. 181.

|| See J. H. Breasted: *Ancient Records*, iii, p. 170.

¶ *The Language of the Pentateuch in its Relation to Egyptian*, p. 183.

of that time conceived to rise at the same spot as the Nubian Nile, that is, at the First Cataract.\*

In the absence of philological and other confirmatory lines of evidence, I do not feel that this conclusion is as satisfactory as Schoff's that "the watercourses of north-eastern Arabia (e.g., the Wadi-er Rumma) were probably the chief producing areas of the land of Havilah which could readily supply caravans for Chaldea or Canaan."†

The problem of interpretation is even more acute when we come to consider the tenth chapter of Genesis. Here we have what is essentially a geographical table, although ostensibly it is a genealogical tree. True there are some names that are quite unambiguous: Mizraim, the Hebrew name for Egypt; Canaan—defined as the land stretching from Sidon on the north to Gaza on the south and from the sea coast to the Rift valley of the Jordan (v. 19). Gomer, the Gimirra of the Assyrian texts, the Kimmerians of the Greek writers; Magog, the country of Gog, the Gugu of Lydia and the Gyges of classical history; Madai, the Manda of the Hittite texts and the Matiene of Herodotus and others; Tubal and Meshech, long since identified with the Tibareni and Moschi peoples, the Tabala and Muska of the Assyrian monuments, who, like the Kimmerians, were to be found on the shores of the Black Sea as well as in the south-east part of Asia Minor.‡ But there are others whose identification is not so certain; for instance, Elishah. This is generally reckoned to be the same place as the Alasiya of the Tel el-Amarna tablets; some see in it a locality of Cyprus, others, including Sayce, the Aleian plain of south-east Cilicia. There is a similar element of doubt about Javan, Kittim and Dodanim. All we can say here is that the first of these is the Hebrew form of the Greek word Ionian and is probably to be identified with Cyprus, that Kittim is also to be associated with the island of Cyprus, possibly with the ancient city of Kition, the site of which is now occupied by Larnaka, and that Dodanim—more correctly Rodanim—is probably Rhodes. But where is Tarshish of the same verse? To look for it in south-east Spain as many have done is to ignore the significance of its

---

\* See Herodotus: *History* ii, 28

† *The Periplus of the Erythraean Sea*, pp. 160-1.

‡ A. H. Sayce: *Journal of Biblical Literature*, vol. xlv, p. 195.

context, which on the balance of evidence I am loath to do. Sayce\* identifies it with Tarsus, the Tarzim of the Cuneiform texts. This brings it into the locality of Elishah and so gives point to the grouping in verse 4 "Elishah and Tarshish, Kittim and Rodanim." It is commonly objected, however, that later Biblical references invalidate an identification so near to Palestine; firstly, because the references in Isa. lxvi, 19, and Jonah i, 3 are to some place—to quote the words of Max Müller† at "the extreme ends of the earth;" secondly, because the most important mart for "silver, iron, tin and lead" (Ezek. xxvii, 12) was Tartessus in south-east Spain. As to the former objection, I can only state my conviction that the passages in question do not demand any such interpretation. As to the latter, none can deny that Spain was rich in all these metals and that the town of Tharsis, 20 miles north of Huelva (the modern port for the Rio Tinto copper and iron mines) preserves the tradition; at the same time, the products are all quite possible for Asia Minor, if we read zinc for tin,‡ the distinction between them in ancient times being little understood.§ Moreover, in Ezekiel's time the Asiatic Tarsus was coming into prominence as the outlet of the silver mines to the north.|| The chief obstacle in the way of accepting the Tartessus identification is that "there is no trace of Phœnician trade in the Iberian peninsula for two centuries after the date of Hiram and Solomon."¶

In view of this evidence, I am strongly of opinion that Tarshish is to be identified with the Tarsus of the Levant.

There are many other highly debatable place-names in this same chapter, but we must pass them over.

As a conspectus of early geographical knowledge, the tenth chapter of Genesis is unique. Notices of a similar character are found scattered throughout the Old Testament, but they

\* *Journal of Biblical Literature*, vol. xlv, p. 196.

† Article "Tarshish," *Hastings' Dictionary of the Bible*.

‡ Even allowing that the metal was tin, there appears to be no good reason why it should not have been traded from tribe to tribe overland along the Danube and the Bosphorus just as, at a later date, it came overland along the Rhone valley to Massilia from the British mines.

§ W. H. Schoff: *The Ship Tyre*, p. 80.

|| A. T. Olmstead: *History of Syria and Palestine*, p. 341.

¶ *Ibid.*, p. 406. See also Strabo iii, 2, 11, and Pliny iv, 120.

are confined almost entirely to the realm of Jewish interests and do not enable us to secure a simultaneous world picture. They say nothing about the epoch-making discoveries of the first millennium B.C. such as the voyages of the Phœnicians to the Tin Isles (= the Cassiterides of Herodotus\* and others) and along the West African coast, or about Persian and Greek reconnaissances in the Indian Ocean which we know of through the writings of the Greeks and Romans. Such geographical references as there are, are mainly allusive and traditional: new names are introduced occasionally, but it is not until the book of Esther,† that is, the reign of Darius, that India is first mentioned and Greece not until the time of Daniel.‡ Carthage, Italy and Iberia are not so much as named and the limits of the habitable earth remain approximately stationary. When the prophets wish to emphasise the scope of a divine measure, it is in such familiar terms as "from Assyria . . . Pathros . . . Cush . . . Hamath and from the isles of the Sea"§ (=Crete and Cyprus?). For them "the uttermost part of the earth" is only the "land beyond the rivers of Ethiopia||" and the limits of their commercial realm are only Lybia, Persia and Ethiopia.¶

Of course, it is possible to argue that although there is no explicit reference in the Old Testament to the Carthaginian or the Persian or Greek explorations, yet the Jews, at least those of post-Davidic times, must have known something of them because of their position athwart the great trade routes of the ancient world, and that for that reason an examination of the Biblical references to the commodities of their commerce will afford a valuable indication of their knowledge of the earth. If we take this view, we must be careful to remember that no exact equation between the geographical distribution of those commodities and the extent of contemporary knowledge is possible. Take cinnamon, for instance. It is now generally agreed that the true cinnamon of the Egyptians, Hebrews, Greeks, and Romans, both the shoots (= cinnamon proper)

---

\* *History*, iii, 115.

† Esther i, 2.

‡ Dan. viii, 21.

§ Isa. xi, 11.

|| *Ibid.*, xviii, 1.

¶ Ezek. xxvii, 10; xxxviii, 5.

and the bark (=casia) came from countries as far afield as Burma and Ceylon, and even China.\* In transit to the Levant, its source of origin was obscured and it became falsely associated with southern Arabia and Somaliland, whither it came in Indian vessels. Even after direct trade with India was established and the Romans found that at least Arabia was not the true source of cinnamon, the fact that India had traded for many centuries with Somaliland and continued to do so, was strong enough to cause the Romans to believe that cinnamon was a product of Somaliland.†

The point is abundantly illustrated in the famous "Commercial" chapter of Ezekiel, the twenty-seventh. The writer's purpose here manifestly was to portray the commercial supremacy of Tyre and her "world-wide" connections, but it is quite clear that he was unaware of the more outlying of them: thus "bright iron" (=steel)—almost exclusively an Indian product in the pre-Christian era—casia and calamus, also typical products of the Middle East, are known only as wares of Vedan, Jevan and Uzal,‡ towns of southern Arabia.§ "All spices with all precious stones and gold"|| are associated with Sheba and Raamah, also towns of southern Arabia,¶ whereas only gold and a few spices, e.g., frankincense and myrrh, are native to those localities. The other common varieties came from farther east: spikenard from India (the Hindu Kush foot-hills)\*\*, camphor from Sumatra and Borneo, galbanum from Persia, while aloes came almost solely from the island of Socotra. Precious stones were mined chiefly in Upper Egypt, Persia, India and Ceylon; some varieties came only from those countries.†† Under the heading of the trade of

---

\* E. H. Warmington: *The Commerce between the Roman Empire and India*, p. 187.

† *Ibid.*, p. 187.

‡ Ezek. xxvii, 19.

§ See Glaser: *Skizze d. Geschichte u. Geographie Arabiens*, p. 327 et seq. and Schoff: *The Ship Tyre*, p. 84.

|| Ezek. xxvii, 22.

¶ See *Ante*.

\*\* Jeremiah speaks of "incense from Sheba and sweet-cane (= spikenard?) from a far country," vi, 20.

†† Rubies, for instance, were found in ancient times only in Upper Burma, Afghanistan, Badakshan and Ceylon; Lapis lazuli (= sapphire in the Old Testament) only in China, Tibet, Media and Badakshan; Diamonds (Ezek. xxvii, 13) only in the Golconda mines of India and

Tyre with Tarshish, Ezekiel mentions silver, iron, lead and tin ; now the lead and silver of the ancient world came from Andalusia, and tin, as we have already said, from Galicia and the Cassiterides, but there is no indication anywhere in his writings that Ezekiel knew this. The reference to ivory and ebony in the same chapter would seem to provide still further evidence of the limitation of contemporary knowledge. There these two commodities are associated with Dedan, a locality on the Oman shore of the Persian Gulf.\* Arabia, however, is neither the home of the elephant nor of the various-species of the Natural Order Ebenaceae from which the ebony hardwood comes. In Ezekiel's day only Ethiopia and India produced these valuable commodities. As there was a well-established maritime trade between the ports of the western coast of India and the Persian Gulf, † even in remote times, it is more than likely that Dedan was one of the ports where Indian vessel met Arab caravan ‡ and that the commodities became associated in the mind of Mediterranean peoples with the entrepôt rather than with the place of origin.

It will be obvious by now that if we want to find the real extent of geographical exploration and knowledge in Old Testament times, we must seek it in extra-Biblical sources. There is no scarcity of material here, but before 500 B.C. the records are

---

the peridot (= topaz in the Old Testament) only in the Isle of St. John, in the Red Sea. The emerald, coral and agate (Ezek. xxvii, 16) are all strangers to Syria in connection with whose commerce they are listed. The emerald and agate normally came from the Cleopatra mines in Upper Egypt (the emerald was also a characteristic Indian stone), while the coral was obtained chiefly from the Red Sea, the Persian Gulf and Southern Italy.

\* See Schoff: *The Periplus of the Erythraean Sea*, p. 153.

† It is instructive to find that the *Periplus of the Erythraean Sea* (§36) speaks of ebony being shipped from Barygaza (= Broach) to Ommana.

‡ The towns enumerated in verse 23 of the same chapter filled similar roles: Canneh (= Cana of the *Periplus*?) and Eden (= Aden?) in respect of the Red Sea traffic, Haran and Chilmad in respect of the Fertile Crescent traffic between India and the Levant. Strategic location was, practically speaking, their only *raison d'être*; "the choice wares, the wrappings in blue and brodered work, the chests of rich apparel" (verse 24) were not of their manufacture: they came from India which in those times held a monopoly of the high quality trade in cloths. It is perhaps not without significance that the first Biblical references to India and cotton occur in the same chapter—the first chapter of Esther.

fragmentary and any reconstruction of the "oikumene" highly conjectural.

From archæological sources it is clear that the Minoans, Mycenæans and Phœnicians had travelled the Mediterranean from end to end by the close of the first millennium B.C. The Phœnicians may even have discovered its communication with the Atlantic before then, although "the idea that they were sailing to the Tin Isles as early as 1500 B.C. is hardly to be reconciled with what we know of the Mediterranean at that period."\* Tradition has it that their oldest colonies in the West, *e.g.*, Utica, Hippo, Leptis Magna, were founded about 1100 B.C.; but there is no archæological evidence for the presence of Phœnicians in the western basin of the Mediterranean before about the middle of the eighth century B.C.† Of their geographical knowledge we know nothing: it was probably very considerable, but as they left no literature, it has been lost beyond recovery.

By 600 B.C. the Greeks had superseded the Phœnicians in eastern Mediterranean waters. Repelled from the Spanish and African coasts by the Carthaginians, they opened up the Black Sea and planted colonies, by degrees, all along its shores. This brought them into touch with the various Scythian tribes concerning whom Herodotus gives such a full account.‡ North-eastward Greek knowledge extended to the Caspian which Herodotus regarded as "a sea by itself, having no connection with any other."§ This opinion, correct though it was, was not universally held in ancient times; later writers like Strabo and Dionysius Periegetes regarded it as an inlet from the northern ocean. Concerning the northern limit of knowledge, Herodotus affirms that the Greeks had penetrated|| beyond Scythia to a people dwelling at the foot of lofty mountains (=Urals?). Exactly how far their knowledge went it is difficult to tell, but if the description that winter lasts eight months and it is cool for the other four¶ is not simply a traveller's exaggeration then the Greeks probably penetrated beyond the Black Earth steppe region into the forest belt. The Hyperboreans, discussed

\* S. A. Cook: *Cambridge Ancient History*, vol. ii, p. 598.

† *Ibid.*, p. 581.

‡ *History*, iv, 1, *et seq.*

§ *Ibid.*, i, 203.

|| *Ibid.*, iv, 25.

¶ *History*, iv, 28.

along with the Scythians, were in Herodotus' view "an imaginary people, the northern counterpart of the blameless Ethiopians of the South."\* Other writers were less incredulous. Pindar† believed in their existence and located them near the sources of the Ister (=Danube), Hecataeus‡ in an island "in the ocean in the regions beyond and opposite Celtice" (=France).† No doubt they represent some remote European tribe, although to identify them would be gratuitous folly, for Europe north of the Alps was an almost unknown world until the days of the Roman Empire. Herodotus himself confesses that although he had taken great pains, he had "never been able to get an assurance from an eyewitness that there is any sea on the further side of Europe."§

But the Greeks, lovers of the sun that they were, were more interested in the warm parts of the earth than the cold. India, in particular, held a great fascination for them.|| In Herodotus' day, India was the most easterly region of the inhabited world.¶ This India was the region about the Upper Indus and its tributaries, the Jhelum, Chenab, Ravi, Beas, Sutlej, better known to us under the name of the Punjab. It is quite evident from his *History* that Herodotus knew nothing of the great southern peninsula or of the Gangetic plain. The Thar Desert is for him the limit of Eastern knowledge.\*\* He is, however, acquainted with the hillmen of the North-West frontier—"more warlike than any of the other tribes"††—whither, from their city of Caspatyrus (= Kashmir?) Darius, King of Persia, sent out Scylax of Caryanda to sail down the Indus to ascertain where it issued into the sea. Scylax not only succeeded in doing this but in sailing across the Arabian Ocean toward the west until he came to Egypt. Some two centuries later (c. 330 B.C.), as a result of another military campaign, Western knowledge of India was almost doubled. Alexander's Macedonian soldiers reached the upper Oxus and Jaxartes Rivers, explored the southern shores of the Caspian and the northern shores of the

---

\* *Ibid.*, iii, 17.

† Olympian Odes, iii, 13-16.

‡ See Diodorus II, 47, 1, *et seq.*

§ *History*, iii, 115.

|| *Ibid.*, iv, 44.

¶ *Ibid.*, iii, 106.

\*\* *Ibid.*, iii, 98.

†† *Ibid.*, iii, 102.

Persian Gulf, crossed the Hindu Kush, explored the Punjaub rivers and sailed down the Indus to its mouth. Nothing, however, was discovered of the vast areas of China and Siberia. Rumour had it that not far north of the Himalayas (which the Greeks seem to have regarded as continuous with the Taurus Mountains)\* lay the Northern Ocean joining the Southern Ocean (*i.e.*, the Indian) east of the Ganges. Alexander, addressing his men on the banks of the Hyphasis (= Beas River), assured them that "there remains no great stretch of land before us up to the River Ganges and the Eastern Sea. This sea . . . you will find, joins the Hyrcanian Sea (= Caspian): for the great sea of ocean circles round the entire earth."†

As to the southern extension of the habitable earth, there was considerable controversy in ancient times. It was generally accepted, of course, that the heat of the sun made the tropics uninhabitable. By most writers, the Sahara was regarded as the *ne plus ultra* of the South. The Greeks never crossed it, but they knew of men who had; five Nasamonians went from Tripoli southwards until they came to "extensive marshes [and] to a town past which a great river flowed . . . running from west to east and containing crocodiles"‡ (the Niger?).

There was only one easy way of exploring the land of Ethiopia and that was to follow the Nile upstream. In Herodotus' day this had been done for a four months' journey by ship and by road§ beyond its course in Egypt, *i.e.*, beyond Elephantine. In this locality "the river flows from the west and the setting of the sun (= Bahr el-Ghazal?)." But as to the regions beyond this "no one is able to make a clear statement: for all this country is a wilderness under the influence of scorching heat."|| This, however, was not the last word on the basin of the Nile; under the Ptolemies (*c.* 320–220 B.C.) expeditions, mainly commercial in character, succeeded in revealing the source of the Atbara River, the existence of the Blue Nile and White Nile, and possibly the marshes above the confluence with the Sobat. Aristotle even speaks of the headwaters of the Nile as flowing from "the so-called silver (= snow-covered) mountain"—the

\* Arrian: *Indica*, viii, 2.

† *Ibid.*, *Anabasis*, v, 26.

‡ Herodotus: *History*, ii, 32.

§ *Ibid.*, ii, 29.

|| *Ibid.*, ii, 31.

first adumbration of the physical geography of equatorial Africa.

And what of the maritime exploration of Africa in these times? The oft-told story of the Phœnician "circumnavigation" needs no reiteration here. If it was actually accomplished, it deserves to rank with the voyages of Leif Ericsson, Columbus and Magellan. The evidence for it, though scanty, is plausible, but few, if any, people—certainly not Herodotus, who records the story\*—understood the meaning of it, witness such common dicta as "Arabia is the last of the inhabited lands towards the south†" and "[from] Meroe the royal seat of the Ethiopians . . . to the boundary of the torrid zone and of the inhabited earth there are 3,000 stades,"‡ i.e., 375 miles approximately. The west coast of Africa, at any rate, was pretty fully explored down to the latitude of Sierra Leone by Hanno the Carthaginian, though Herodotus was apparently unaware of it; for him the south-west frontier of the known world is constituted by Ethiopia, "the last inhabited land in that direction."§ What country he had in mind is difficult to decide, for as Strabo points out "men used to call every southern land by the Ocean Ethiopia."|| All Herodotus tells us is that the region produces gold "in great plenty," together with elephants, ebony and tall men¶—a description that applies almost equally well to Senegambia, Sierra Leone and the Gold Coast.\*\*

Of the "extreme tracts of Europe towards the west," Herodotus could not speak with certainty.†† The Cassiterides, that is the British Isles, were in everything but name unknown to him, but they were revealed very soon after his time by Himilco, the Carthaginian explorer,‡‡ and were subsequently visited and written about by Pytheas of Massilia.§§ The island groups

\* *Ibid.*, iv, 42.

† *Ibid.*, iii., 107.

‡ Strabo: *Geography*, 824-5.

§ *History*, iii, 114.

|| *Geography*, 35.

¶ *History*, iii, 114.

\*\* See E. G. R. Taylor: *Scottish Geographical Magazine*, 1926. Article: *Pactolus—River of Gold*.

†† *History*, iii, 115.

‡‡ Avienus: *Ora Maritima*, 80 *et seq.*

§§ Polybius: *Histories*, vol. xxxiv, 5; and Strabo, *Geography*, ii, 4, 1, *et seq.*

out in the open Atlantic, the Canaries, Azores, Madeiras, were very slow in being discovered and small wonder when we remember that views such as the following were current: "One cannot cross from Gadeira (= Cadiz) towards the dark west. Turn again the sails towards the dry land of Europe."\* . . . "What lies beyond cannot be trodden by the wise or the unwise."† Avienus tells us why: "there no driving blasts of winds are felt upon the deep, no breath of heaven helps on a vessel: moreover, dark mists shroud the sky as with a cloak: fog at all times hides the swirling waters and clouds last all day long in thickest gloom."‡

This survey, brief as it is, will suffice to show how much better informed on the subject of the earth's expanse Greek literature is than Jewish. Why should this be? The reason, I think, lies partly with the purpose of the sacred writings. After the calling of Abram out of Ur, the course of "world" affairs ceases to be the paramount interest of the chroniclers; henceforth it is the fortunes of the Hebrews, their enemies, their allies, their political and religious experiences that pre-occupy their attention.§ But this reason is not entirely satisfactory; it does not explain, for instance, many of the allusions in the commercial chapters of Ezekiel. In my opinion, these and other passages in the Old Testament point to the existence of a conspiracy of silence on the part of the Jews' neighbours, the Phœnicians and Arabians. The Phœnicians, ably succeeded by their colonists the Carthaginians, held for many centuries a monopoly of the western sea-borne trade. To keep it in the face of strong competition from other powers necessitated recourse both to mendacity and secrecy, and with such success, in the case of tin, that long after the Cassiterides had been discovered by the Greeks, the Carthaginians were still able to keep the trade in that commodity in their hands. Strabo tells us that when, on one occasion, "the Romans were closely following a certain ship-captain in order that they too might learn the markets in question, out of jealousy the ship-captain drove his ship out of its course into shoal water:

\* Pindar: *Nemean Odes*, iv, 69-70.

† Pindar: *Olympian Odes*, iii, 45.

‡ *Aratea*, 587-590 (Warmington's translation).

§ Because of this, it is by no means certain that the Old Testament disclosures represent the sum of Jewish geographical knowledge.

and after he had lured the followers into the same ruin, he himself escaped by a piece of wreckage and received from the State the value of the cargo he had lost.”\* Much the same strategies were employed by the Arabians† in the Indian Ocean, but there is hardly need to elaborate the point any further; moreover, my time has gone.

I have covered only a small part of the field embraced by my advertised title: it has proved too vast and my linguistic and archæological equipment too poor. I have contented myself with outlining the geographical knowledge of the Old Testament Jew and Gentile, and sketching the kind of problem encountered by the investigator in that field. In doing so, perhaps I have tended to overstress the limitations rather than the scope of their knowledge. When, however, it is realised that the men of those days could not estimate distances and directions with precision—the modern terrestrial co-ordinates of parallels and meridians were still future, that, in the absence of confirmatory eyewitness accounts and maps, they were not always able to disentangle the facts from the fables; further, that many reports of explorations were lost to posterity because there were no means of reproduction, that many others of commercial value were suppressed lest the revelation of that knowledge might lead to international rivalry, the surprise ceases to be that so much was unknown but that so much was known. After all, from a purely areal point of view, there was very little difference between the world of Malachi’s age and the world of the Middle Ages.

#### DISCUSSION.

Miss A. MILDRED CABLE, F.R.G.S., said: We have listened to-night to a learned discourse on the subject of the “Expanse of the Earth as known in Old Testament times.” The lecturer has suggested to us that every community is, to some extent, interested in the outer world, the land beyond. “What lies over the hills?” they ask. “Where does the sea begin?” they question. “I am journeying to the Land of the Setting Sun, where God dwells,” a

\* *Geography*, iii, 5, 2.

† See E. H. Warmington: *The Commerce between the Roman Empire and India*, p. 188, *et passim*.

Central Asian once said to me. Such expressions are the indications of an instinct in man which convinces him that there are lands beyond his ken.

As the lecturer reminded us, travellers' tales have to be accounted for, as must be the wares which the travellers bring with them. This whole subject is of great interest to Bible students, for not only do we trace the expansion of knowledge by the mention of places and products but the mentality of a nation is strikingly revealed by the degree of importance which its people attach to the exploration of other lands.

Again the lecturer reminded us that a land only needed to be beyond the horizon in order to be referred to as "the ends of the earth." Such an attitude of mind is, I suppose, peculiar to people who are obsessed by a sense of national importance, such a sense being apt to colour every avenue of thought. We have in Central Asia an interesting illustration. The word "Beshbaliq" (Five Fish) is the name of a town near Uch Turfan in Western Turkestan. When a Central Asian wishes to speak of the "uttermost distance," he speaks of going as far as "Beshbaliq." The outer world does not enter his reckoning, though he knows of it and even has dealings with it. He knows of Hindustan and of Russia, but "Beshbaliq" is still to him symbolic of the uttermost parts of the earth.

It is quite possible that the Hebrew people declined in their knowledge of the world after the call of Abram and that his immediate descendants fell far behind their ancestors in world knowledge. They came increasingly to regard themselves as "God's own people," the subjects of a Theocracy, governed by laws, traditions and regulations peculiar to themselves. Outside lay the nations of the world and the lands of the uncircumcised; peopled by those outside the Covenant and on whom the wrath of God would be visited.

The teachers at the palace of a Pharaoh gave Moses instruction in all the wisdom of the Egyptians, but later on, for every Hebrew, Jerusalem became the pivot and the centre. Nothing but the revolutionary teaching of Our Lord availed to waken a sense of responsibility for and interest in what was literally "all the world"—and this in spite of the fact that in the very call of Abram, Jehovah had declared, "I will make of thee a great nation

and in thee shall all the families of the earth be blessed." Yet the families of the earth as such soon ceased to have any interest for them.

We have a parallel in the attitude of China up to modern times. The words "Middle Kingdom" for China proper, "Outside Kingdom" for everyone else. "Within the Mouth" for its own provinces and "Without the Mouth" for its own dependencies, indicate the trend of Chinese thought. A friend of mine was once listening to an old Chinese teacher giving a geography lesson to his boys. He showed them a new map of the world in contrast with the old map where China is given as the central expanse and all round it are grouped smaller states, then he said: "Some people say the world is round and some people say the earth is square: all that dispute means nothing to us; it is quite unimportant." Of course, this point of view arises because China as "Middle Kingdom" cares nothing for the lands outside. Such a viewpoint limits knowledge of the world and maybe the unconcern regarding the outer world in Old Testament times is largely accounted for in this way.

In passing, it is to be noted regarding the rumour that a great sea lay north of the Himalayas, that Dr. Sven Hedin's Expedition has found a great quantity of shells and of fish fossils in the Gobi Desert. I had the opportunity of seeing many specimens of their finds. Tradition persists that a great ocean once covered that desert and I have been shown by the natives a little pond more full of fish than any water I ever saw and was assured that I was looking at the last drop of that vast sea!

The lecturer referred to the source of various goods, such as cinnamon, being obscured through the inevitable change of travel routes. Internal strife has often led to the abandonment of such routes, so that in time even the great Silk Road connecting Peking with Rome became a wilderness while the silk was conveyed by sea, thus giving rise to geographical confusion.

A study of the habits and outlook of the more exclusive nations in modern times, helps us to better understand the viewpoint of the Hebrew people in early days. They were proud, exclusive and indifferent to the history and character of other men. They were not so much ignorant as oblivious of them.

It is instructive to note that knowledge increases as man obeys the Divine law and enters into the Divine intention. If all the families of the earth are to be blessed through one nation, it follows that the nation must get to know about the families of the earth. Exclusiveness is the outcome of national pride.

The Rev. H. C. MORTON, B.A., Ph.D., said that there were just two or three remarks, more perhaps in the nature of questions to the lecturer, that he would like to make. The paper was one that involved much research and few conclusions ; but that was the fault perhaps rather of the subject than of the lecturer.

First, with reference to the very interesting suggestion that Gihon and Pison, two of the rivers of the Eden record, are to be placed in South Arabia. Could the lecturer tell us the names and dimensions of any rivers now existing there ? I was in Aden last year. Quite a few miles in the interior were vast reservoirs coming from very ancient times, which indicated perhaps a well-watered country ; and the Navigation Officer of my vessel told me that a few years previously he had made an expedition some distance into the interior and was there when great storms flooded large portions of the countryside. So even in our day there is sometimes considerable rainfall.

Secondly, can the lecturer give us the dates of the Assyrian tablets which refer to the Gimarru, who, I suppose, beyond question would be the sons of Gomer, or the Kymry. I ask the question because there is, on the Assyrian tablets of about the eighth century, another occurrence of a word wonderfully like Kymry, namely, the Assyrians refer to the House of Omri, King of Israel, and they write it Khumri, there being a faint guttural before the " o " of Omri.

I am specially interested in the knowledge of the Earth in the early times, when, as the lecturer said, the Book of Genesis was written. Genesis x, Mr. Kimble calls geographical ; but is not that the old view which is now discarded in favour of the view that Genesis x is a very great ethnological document ? My impression is that the far parts of Europe, and in particular I am thinking of the British Isles, were well known many centuries earlier than Mr. Kimble gives us to understand. I suppose, roughly

speaking, one might say the Book of Genesis was written in the sixteenth century B.C.

I think the Kymric traditions represent Britain as occupied by the Kymry about as early as that date. Then there was, according to tradition, a further migration of the Kymry from Troy, and we have on record the remonstrance, addressed by Cassivelaunus to Julius Cæsar when Caesar invaded Britain, in which Cassivelaunus reminded Cæsar that both the Romans and a part of the Britons were descended from the men of Troy.

Literature is late. Apart from the Bible there is very little dependable history of the times of Moses, and apart from the Bible we are dependent for early time mainly upon tradition, later reduced to writing; and I would suggest to the lecturer that British traditions may have a considerable bearing upon the expanse of the Earth as known in the earliest times.

Lieut-Col. W. B. LANE, C.I.E., C.B.E., said: I think that we are too inclined to apply the present-day geographical conditions to the Garden of Eden period, and I suggest that in those days there was a system of freshwater inland lakes like the Caspian Sea; in fact, a chain of them, for we know that Gibraltar was connected with Africa, Sicily, and Italy also. The Ægean Sea with its numerous islands means that Greece was connected with Asia Minor, thus making the Black Sea a lake. I suggest that the Red Sea and Persian Gulf were also lakes and that the four rivers of Eden flowed into the latter separately as we know that the Tigris and Euphrates certainly did. I suggest also that the Hiddekel "that is it which goeth eastward to Assyria" (marginal note) gives us a clue to the orientation of Eden in which case the Euphrates is the north, Gihon the west and Pison the south. (Note that all temples were orientated.)

It will be noticed that the coast of Arabia is mountainous, that there is very little foreshore and that the slope of the whole of the Arabian continent is towards Basrah as a rough centre-point. The three dry watercourses in the southern part mentioned by the lecturer doubtless joined the large dry watercourse extending in a N.E. direction towards Basrah called Wadi Ermak. It is shown on maps. This I consider to be the Pison: "that is it which compasseth the whole land of Havilah where there is gold: And

the gold of that land is good : there is bdellium and the onyx stone." Bdellium is gum frankincense which is, I believe, still exported from Dhufar (? Ophir of Commander Cranford). Onyx is a mixture of quartz and it is in quartz that gold is found and it is the disintegration of quartz that produces the gold in the sands of rivers. This was extracted in ancient times by washing the sand doubtless in the same way as I have seen on the Indus in the Gilgit District of Northern Kashmir. The hills must have been covered with forests and attracted a greater rainfall. The devastation of Arabia is due to two things : (a) The Turk and his predecessors who never planted any trees or protected them and (b) the goats of the Beduin, and before him those of the patriarchs, which ate off any seedlings and stopped any growth. The Gihon : " the same is it that compasseth the whole land of Ethiopia." This must be the Nile ; but we cannot understand how it can possibly be till we know of the Great Rift extending from the African Lakes through the Red Sea, up through Akaba past Petra, and up the Jordan Valley. The Nile did not always flow into the Mediterranean but turned into the Red Sea near Thebes. The late Canon Tristram in 1864 made a study of the fish of the Sea of Galilee and found some species hitherto unknown. After the discovery of the Victoria Nyanza, species of fish were discovered similar to those only found in the Sea of Galilee. This fact suggested the possibility in a previous age of a chain of freshwater lakes along the line of the Rifts noted in Professor Huxley's map, including the Red Sea and the Dead Sea up to the Sea of Galilee. It is to me extraordinary but very convincing of its truth that the Bible should have contained evidence of the Great Rift which was only described towards the end of the last century. True, is it not, that we should search the Scriptures ?

Sir CHARLES CLOSE, K.B.E., &c., F.R.S., wrote : I am glad to have had the opportunity of reading a proof of Mr. Kimble's very instructive paper on " The Expanse of the Earth as known in Old Testament Times." The paper is packed with information, and I am far from being able to comment upon the quotations from the various authorities mentioned. But it occurs to me that we have a kind of measure of the extreme slowness of the diffusion of culture in ancient times in the long time that it took for the

use of bronze to spread to western Europe, and also the time that it required to spread a knowledge of the use of iron. In Palestine, for instance, the Bronze Age is usually supposed to date from about 3000 B.C., whilst the Bronze Age in England did not begin until about 1800 B.C. Here we have an interval of 1,200 years or so. In the case of the Iron Age this may be said to have commenced in Palestine about 1200 B.C., whereas the use of iron in England must be dated as beginning sometime about the seventh century B.C. Here we have an interval of five or six hundred years. This gives us a kind of guide to the rate of the spread of a culture, and perhaps we might assume that cultures spread in those days at a rate which might be roughly visualised as depending on the inverse square of the distance from the cultural focus. But I don't know that a speculation of this kind is of much value in trying to get some idea of the spread of geographical knowledge in a very distant past.

Colonel SKINNER writes: The association of "All spices with all precious stones and gold" with Sheba and Ramah, also towns of southern Arabia (p. 6, second paragraph), *i.e.*, of the commodities with the entrepôt rather than with their real country of origin, gives rise to an interesting question as to whether the ancient figure of speech, "the ends of the earth," may not have had more definite significance than we now credit it with. Thus, in Matt. xii, 42, and Luke xi, 31 (R.V.) Our Lord's citation of "The Queen of the South" (Queen of Sheba) as "coming" from the ends of the earth, suggests that to the peoples of the near East the south corner of Arabia may have been as Land's End is to us or Finisterre to Spain, *i.e.*, giving the expression a definite geographical signification.

#### AUTHOR'S REPLY.

I am grateful for the observations and criticisms that my paper has evoked. Lack of space compels me to confine my concluding remarks to points raised by two of the speakers.

Considerable light is thrown upon Dr. Morton's first question, *viz.*, the rivers of Central Arabia, by the writings of C. M. Doughty, St. John Philby,\* and A. Musil.† In his *Travels in Arabia*

\* *Arabia of the Wahhabis.*

† *Arabia Deserta, and Northern Negd.*

*Deserta*, speaking of the Wadi er Rumma, Doughty says that its length is "forty-five days or camel marches (that were almost a 1,000 miles); it lies through a land-breadth, measured from the heads in the Harrat Kheybar to the outgoing near Basra, of nearly 500 miles. When the Wadi is in flood—that is twice or thrice in a century—the valley flows down as a river." (P. 392, vol. ii.) It receives as many as seventy tributary wadis.

On the question of the "Gimarra" inspections, it is possible to speak with certainty, for the word first appears in connection with some correspondence of a provincial governor of Assyria in the reign of Sargon, about the year 705 B.C.\* Thereafter, in the reigns of Sennacherib, Esarhaddon and Ashurbanipal it occurs quite frequently.

The identification of the Kymry—a branch of the Celts—with the Gimarra or sons of Gomer, raises a controversy that I cannot pursue very far here. It is certainly an attractive hypothesis, but I think that Dr. Morton will find that the verbal similarity of the two names is the chief ground of his confidence. The Gimarra (or Gimarru) are universally held to be the Cimmerians of the Odyssey and of Herodotus, whom anthropologists relate to the Thracians—a dark-complexioned, long-skulled people. Tradition has it that the Cimbri of Jutland are of the same stock; even if this is true, which is highly improbable, they have very little in common, racially, with the fair-haired, blue-eyed and long-headed Kymry who were established in Britain c. 600 B.C.,† some 500 years before we first hear of the Cimbri. The Trojan tradition, to which Dr. Morton also refers, must likewise be held to be unhistorical in the light of the latest ethnical researches.‡

My reasons for regarding the tenth chapter of Genesis as having geographical as well as ethnological value are based largely upon the reading of the late Professor A. H. Sayce's works§ to which,

\* E. H. Minns, in *The Cambridge Ancient History*, vol. iii, p. 188.

† Not c. 1500 B.C. as Dr. Morton suggests.

‡ H. Hubert, *The Rise of the Celts*.

§ *Races of the Old Testament*, and the *Journal of Biblical Literature*, vol. xlv, "The Tenth Chapter of Genesis."

in view of the limitations of space, I would respectfully draw Dr. Morton's attention.

On the question of the knowledge of the British Isles in early times, I am afraid that Dr. Morton has misconstrued the scope of my inquiry; my concern has been entirely with the intra-Biblical evidence of an expanding "oikumene."

With regard to Col. Lane's observations, I should like to say three things.

(1) That there was at one time a chain of fresh water lakes following the line of the Great Rift Valley from Equatorial Africa to the Dead Sea is an undisputed fact of geology; that these lakes did not exist in "the Garden of Eden period" is equally certain as the main lines of the present drainage were established by Oligocene, *i.e.*, pre-glacial times.\* Estimates of biological time-periods vary notoriously, but it is generally believed that at least several hundred thousand years elapsed between the close of this period and the first appearance of man.

(2) In the light of our present-day knowledge of the tectonic history of the Rift Valley, I think that Col. Lane would find it difficult to substantiate his theory that the Nile formerly had its outlet in the Persian Gulf. Even though there is some warrant for believing that the Nile did not always flow directly into the Mediterranean, there is none for supposing that it continued its course up the Gulf of Akaba, past the Dead Sea and so to the Mesopotamian lowlands—not even in pre-Oligocene times. Suess, Gregory and Blanckenhorn are unanimous that the Rift comes to an abrupt end in Northern Syria. If the Jordan valley was ever connected with the open sea it was by way of the Gulf of Akaba and the Red Sea and not the Persian Gulf. In view of this I cannot share Col. Lane's optimism that the Bible contains evidence of the geological history of the Rift Valley.

(3) To the Ancients, Ethiopia represented the land south of Egypt (*i.e.*, south of the First Cataract) that was bounded by the Upper Nile on the west and the Red Sea and Arabian Gulf on the east; its southern extremity they did not profess to be able to fix. Now

---

\* J. W. Gregory, *The Rift Valley and Geology of East Africa*, p. 359 *et seq.*

the Upper Nile is the only river that satisfies the Biblical description that "it compasseth (= goes round) the whole land of Ethiopia." The word "Gihon," moreover, signifies "great leaper"—a very appropriate epithet for the Nubian Nile with its mighty cataracts and tumbling waters. It seems to me, therefore, that Gihon can be equated with the Nile without resort to dubious geological arguments.