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I. BURNEY'S SOTERIOLOGY AND THE CUMBERLAND THEOLOGY.¹

DR. BURNEY'S book is, on several accounts, worthy of the attention of the Christian public:

1. Along with a world of sophistries it occasionally exhibits a real truth in a vivid light.

2. It is a most virulent attack on the penal and substitutionary theory of the atonement, and presents a "new theory" of the atonement, which would suit, with only a slight modification, a Unitarian.

3. Its author's position makes the book worthy of consideration; for he is, perhaps, the most distinguished and honored teacher in a great church; and the doctrines of that church can, because of its numbers and aggressiveness, no longer be looked upon with indifference.

4. The production of such a book in such a quarter presents an excellent example of "the logic of events." Our Cumberland brethren set out, in 1810, with the rejection of the doctrine of predestination, professing to receive remaining Calvinism in its integrity. The reader of this volume will see evidence only too good that the Cumberland Church has already moved far out of Calvinism and into Pelagian Unitarianism, or, if not into it, hard by it, and only kept out by gross and ridiculous inconsistencies.

¹ *Atonement.—Soteriology.* The sacrificial, in contrast with the penal, substitutionary, and merely moral or exemplary theories of propitiation. By *S. G. Burney, D. D., LL. D., Professor of Systematic Theology in Cumberland University.* Nashville, Tenn.: Cumberland Presbyterian Publishing House. 1888.

IV. THE DELUGE.

I. TESTIMONY OF TRADITION.

“THE one tradition which is really universal among those bearing on the history of primitive man is that of the deluge. It goes back to the earliest ages of the world, and can be nothing but an account of a real and well authenticated fact.”¹ Of similar import with this testimony of Lenormant is that of Canon Rawlinson. “The evidence shows a consentient belief among members of *all* the great races into which ethnologists have divided mankind. Among the *Semites*, the Babylonians and Hebrews; among the *Hamites*, the Egyptians; among the *Aryans*, the Indians, Armenians, Phrygians, Lythunians, Goths, Celts and Greeks; among the *Turians*, the Chinese, Mexicans, Red Indians and Polyneesian Islanders, held the belief which has thus the character of a universal tradition, a tradition of which but one rational account can be given, namely, that it embodies the recollection of a fact in which all mankind was concerned.”²

“Of all the true traditions relative to the great deluge,” writes Lenormant, “by far the most curious is that of the Chaldeans, made known to the Greeks by the historian Berosus,” which is as follows:

“In the time of Xisuthrus happened a great deluge, the history of which is thus described. The deity Chronus (the Greeks thus translate the Chaldæo-Assyrian name Ilu) appeared to him in a vision, and warned him that upon the fifteenth day of the month Dœsius (Sivan) there would be a flood by which mankind would be destroyed. He therefore enjoined him to write a history of the beginning, procedure, and conclusion of all things, and to bury it in the City of the Sun at Sippara; and to build a vessel, and take with him into it his friends and relations, and to convey on board everything necessary to sustain life, together with all the different animals, both birds and quadrupeds, and to trust himself fearlessly to the deep. Having asked the deity whither he was to sail, he was answered, ‘To the gods,’ upon which he offered up a prayer for the good of mankind. He then obeyed the divine admonition, and built a vessel five stadia in length and two in breadth; into this he put everything which he had prepared, and last of all conveyed into it his wife, his children and his friends. After the flood had been upon

¹ *Ancient History of the East*, p. 13.

² *Butler's Bible Work*, Old Testament, Vol. I., p. 246.

the earth, and was in time abated, Xisuthrus sent out birds from the vessel, which, not finding any food, nor any place whereupon they might rest their feet, returned to him again. After an interval of some days he sent them forth a second time, and they now returned with their feet tinged with mud. He made trial a third time with these birds, but they returned no more, from whence he judged that the surface of the earth had appeared above the waters. He therefore made an opening in the vessel, and upon looking out found that it was stranded upon the side of some mountain, upon which he immediately quitted it, with his wife, his daughter and the pilot. Xisuthrus then paid his adoration to the earth; and having constructed an altar, offered sacrifices to the gods; and with those who had come out of the vessel with him disappeared. They who remained within finding that their companions did not return, quitted the vessel with many lamentations, and called continually on the name of Xisuthrus. Him they saw no more, but they could distinguish his voice in the air, and could hear him admonish them to pay due regard to religion, and likewise informed them that it was on account of this that he was translated to live with the gods; and that his wife and daughter and the pilot had obtained the same honor. To this he added that they should return to Babylonia, and, as it was ordained, search for the writings at Sippara, which they were to make known to all mankind; moreover, that the place where they then were was the land of Armenia. The rest having heard these words offered sacrifices to the gods, and taking a circuit journeyed towards Babylonia. The vessel being thus stranded, some part of it yet remains in the Gordyæan mountain of Armenia; and the people scrape off the bitumen with which it had been coated, and make use of it by way of an alexipharmic and amulet. And when they returned to Babylon, and had found the writings at Sippara, they built cities and erected temples; and Babylon was thus inhabited again."¹

If the reader will now carefully compare with this the account of the deluge given us by Moses in Gen. vi.—viii., considering it for the present simply as the Hebrew form of the universal tradition, he cannot but notice that, while they agree in many particulars, they differ in others, and some of these matters of prime importance; *e. g.*, (1), The dimensions of the ark, as given by Moses, are three hundred cubits in length by fifty cubits in breadth. If we understand the cubit here mentioned to be the sacred cubit, and take the length of that cubit, as determined by Sir Isaac Newton, to be about twenty-five inches, the dimensions of the ark will not differ greatly from those of the *Great Eastern*; whilst Berosus' dimensions of five stadia in length by two in breadth, *i. e.*, more than half a mile long by nearly a quarter of a mile broad, are simply incredible. A vessel of such size would break by its own weight. (2), The Chaldean tradition embodies no moral les-

¹ *Ancient History of the East*, Vol. I., pp. 503-4.

son, while that of Moses does. In the Chaldean tradition this most terrible catastrophe which has ever befallen the human race appears simply as a "happening," a sort of fatal accident, whilst in Moses' account it stands forth distinctly as inflicted of God on mankind as a punishment for their sins; and it is not until "the earth becomes corrupt before God, and filled with violence," that it occurs. (3), Both versions of the tradition are pervaded by a religious spirit, that of the Chaldean being distinctly poly-theistic, whilst that of Moses is as distinctly mono-theistic. M. Renouf, speaking of the religion of Egypt, writes: "The sublimest portions are demonstrably ancient; the last stage of the Egyptian religion was by far the grossest and most corrupt." And this which is true of the Egyptian religion, is, I believe, true of all religions. For these reasons the inference seems to be a fair one, that in the Mosaic account we have the tradition of the deluge in its oldest and purest form.

II. THE MOSAIC HISTORY OF THE DELUGE.

The Mosaic account of the deluge, contained in Gen. vi.-viii., claims to be something more than the mere Hebrew form of a universal tradition. As a part of Scripture "given by inspiration of God," it must be considered veritable history, and as such our Lord and his apostles treat it. Our Lord, addressing his disciples shortly before his death, says: "For as in the days that were before the flood they were eating and drinking, marrying and giving in marriage, until the day that Noah entered into the ark, and knew not until the flood came, and took them all away; so also the coming of the Son of man shall be." (Matt. xxiv. 38, 39.) And the apostle Paul writes: "By faith Noah, being warned of God of things not seen as yet, moved with fear, prepared an ark to the saving of his house, by the which he condemned the world, and became heir of the righteousness which is by faith." (Heb. xi. 7.) And Peter: "God spared not the old world, but saved Noah, the eighth person, a preacher of righteousness, bringing in the flood upon the world of the ungodly." (2 Pet. ii. 5.) The Mosaic narrative itself has the characteristics of veritable history, especially in this, that the deluge does not appear as an un-

accountable accident, a strange catastrophe, as in the traditional accounts of the event, but as a solemn, deliberate judgment of God upon a world given over to wickedness. "And God looked upon the earth, and behold it was corrupt, for all flesh had corrupted his way upon the earth. And God said unto Noah, The end of all flesh has come before me; for the earth is filled with violence through them. And behold I, even I, do bring a flood of waters upon the earth, to destroy all flesh, wherein is the breath of life, from under heaven, and every thing that is in the earth shall die; but with thee will I establish my covenant; and thou shalt come into the ark, thou and thy sons, and thy wife, and thy sons' wives with thee." (Gen. vi. 12-18.) Such a narrative is worthy a place in a history of the world written to teach man the true religion, and to secure the truthfulness of the narrative is worthy "the inspiration of God."

In order to a correct understanding of the Mosaic narrative of the deluge, there are several questions which must be answered, and to an examination of these I will now ask the reader's attention.

1. *When did the deluge occur?* The Mosaic account of the deluge is part of a continuous history, which fixes the date at about 3155 B. C., according to Hale's chronology, or 2348 B. C., according to that of Ussher. The Masoretic Hebrew text, the Samaritan Pentateuch and the Septuagint, differ in the numbers they give in their genealogical tables, and hence the difference in the estimates made by modern scholars, such as that between the estimates of Hale and Ussher, quoted above. It would be altogether aside from my present purpose to discuss this question of chronology. Either of the dates given above is sufficiently near the truth to answer all the demands I shall make upon it in the present article. The Chaldean tradition tells us that the friends of Xisuthrus (the Chaldean Noah), who had been preserved in the ark, "journeyed to Babylonia, . . . built cities, erected temples, and Babylon was inhabited again,"—thus identifying the date of the deluge with the commencement of the Babylonian empire, known to us through history and the monuments.

Can we determine with any degree of certainty the date of the commencement of the Babylonian empire? On this subject

Canon Rawlinson, Professor of Ancient History at Oxford, writes: "Exaggerated chronologies are common to a large number of nations, but critical examination has (at any rate, in all cases but one), demonstrated their fallacy, and the many millions of years postulated for their past civilization and history by the Babylonians and Assyrians, the Hindoos and Chinese, and others, have been shown to be pure fiction, utterly unworthy of belief, and not even requiring any very elaborate refutation. Cuneiform scholars confidently place the beginning of Babylon about 2300 B. C., of Assyria about 1500 B. C. Aryan scholars place the dawn of Iranic civilization about 1500 B. C., of India about 1200 B. C. Chinese investigators can find nothing solid or substantial in the past of "the Celestials" earlier than 781 B. C., or, at the furthest, 1154 B. C.¹ Thus it will be seen that the date assigned the deluge by the Chaldean tradition is in substantial harmony with that assigned by the Mosaic history. The deluge occurred some four thousand or five thousand years ago.

2. *Was the flood universal; did it cover literally the whole earth?* The older commentators understood Moses to assert its universality; yet not without exception, for Matthew Pool, who lived and wrote during the latter half of the seventeenth century, in his notes on Gen. vii. 9, writes: "Peradventure this flood might not be simply universal, over the whole earth, but only over the habitable world, where either men or beasts lived, which was as much as the meritorious cause of the flood, men's sins, or the end of it, the destruction of men and beasts, required."² On the other hand, most modern commentators understand him to assert that the flood extended so far, and only so far, as the human race extended; this being all, in their judgment, that his language, fairly interpreted, requires.

The universality of the tradition is satisfactorily accounted for by the fact, admitted on all hands, that in the flood the whole human race was destroyed, with the exception of the one family saved in the ark, and that all the peoples of the earth to-day are descended from that one family. On the Mosaic narrative itself,

¹ *Origin of Nations*, page 148.

² *Pool's Annotations*.

Sir J. W. Dawson remarks: "I have long thought that the narrative in Gen. vi.-viii. can be understood only on the supposition that it is a contemporary journal, or log, of an eye-witness, incorporated by the author of Genesis into his work. The dates of the rising and falling of the waters, the note of soundings over the hill-tops when the maximum was attained, and many other details, as well as the whole tone of the narrative, seem to require this supposition."¹

In Scripture, as in other writings, expressions general in form are often to be understood as limited in meaning, their true signification being determined by the context, or by a consideration of the style in which they are written. When Moses, giving an account of the famine which occurred in Joseph's day, writes: "And the famine was over all the face of the earth," (Gen. xli. 56,) and again, speaking of the dread of Israel which God caused the Canaanites to feel, writes: "This day will I (God) begin to put the dread of thee upon the nations that are under the whole heaven," (Deut. ii. 25,) no one understands the expressions "over all the face of the earth," and "under the whole heaven," as expressing literal universality; and yet they are the very expressions in Moses' account of the flood which the older commentators quote in support of the opinion which they maintained. The literal truth of the narrative requires us to believe that the flood was universal in so far as the then inhabited earth was concerned; that the whole human race, with the exception of Noah and his family, perished in its waters; but the language of Moses does not, I think, fairly require more than this.

In the Scripture narrative the deluge is presented as a terrible judgment of God, brought upon the earth by the exceeding sinfulness of man. "And God said unto Noah, The end of all flesh is come before me; for the earth is filled with violence through them; and behold I will destroy them with the earth." (Gen. vi. 13.) In this particular it belongs to the same category with the subsequent destruction of Sodom and Gomorrah in the days of Abraham; and these two events are cited together by our Lord as illustrations of the suddenness with which God's judgments shall

¹ *The Earth and Man*, p. 290.

come upon the wicked at the end of the world. (Luke xvii. 26-30.) As in the case of Sodom and Gomorrah, what Pool calls "the meritorious cause," undoubtedly limited the extent of the judgment; so would we naturally suppose it to have been in the case of the deluge, and there is nothing in the language of Moses, as we have seen, at variance with such a supposition.

How far had the human race extended itself at the time the deluge occurred? This is a question difficult to answer, and it is not surprising that extreme opinions have been advocated by different writers. The fact stated by Moses, that man lived to a far greater age in antediluvial times than now, would point to a far more rapid multiplication and consequent spread of the race than now. But, on the other hand, Moses tells us that the corruption and violence, which ultimately brought on the judgment of the deluge, began to prevail at an early date among the descendants of Cain, and, as all experience testifies, this would prove a serious check upon the rapid multiplication of the race. Because of the corruption and violence which have long prevailed in the rich valleys of the Euphrates and the Nile, their population to-day is less than it was eighteen hundred years ago. As probable a supposition as any other is that which assumes the rate of increase during the years which preceded the deluge to have been about the same with that of the years since the commencement of the Christian era; and if so, the human race when the deluge came would have peopled a large part of Asia, most of Europe, and possibly the Nile Valley in Africa.

3. *Where did the ark rest when the deluge was past?* What was the starting point of migration for the post-diluvial nations of the east? To this question the Chaldean tradition and Moses give us one and the same answer. According to Chaldean tradition, the companions of Xisuthrus "heard his voice in the air," informing them "that the place where they then were was the land of Armenia." Moses writes: "And the ark rested, in the seventh month and seventeenth day of the month, upon the mountains of Ararat." (Gen. viii. 4.) "Ararat occurs in the Bible only as the name of a country which, in the Assyrian inscriptions, is called

Urarti, in classic literature Armenia, and by the native inhabitants Haik."¹

Armenia, the high table-land on the southern slope of the Caucasus, stretching down towards Mesopotamia, by the universal consent of modern historians, is regarded as the post-diluvial cradle of the human race. This conclusion is based upon such facts as these, viz. : (1), The most ancient traditions all point to this as the starting point of the peoples of the earth ; (2), It is the native country of most of the cereals which have furnished food for man the world over, and of many of the domesticated animals which have accompanied him in his migrations ; and (3), It is here, and clustering around this as a centre, we find the oldest nations—the only ones that have a history reaching back into the long past—*e. g.*, the Chinese, the Indians, the Persians, the Assyrians, the Jews, the Phenicians, and the Egyptians.

4. *In what condition, as to religion and civilization, was the human race at the time the deluge occurred ?* Noah and his immediate family still retained a knowledge of the one true God, and of the religion he had made known to man. Moses writes : " And the Lord said unto Noah, Come thou and all thy house into the ark ; for thee have I seen righteous before me in this generation." (Gen. vii. 1.) And in the New Testament Scriptures Noah's name is enrolled in the list of ancient worthies who illustrated in their lives the nature of saving faith. (See Heb. xi. 7.) As to civilization, Noah, and the people among whom he lived, probably the descendants of Seth, must have possessed a knowledge of ship-building, at least, such as implies a knowledge of the mechanic arts in general, far in advance of that possessed by savages. Both Moses' history and the Chaldean tradition, in what they tell us of the building of cities shortly after the flood, clearly imply a state of advanced civilization as existing among the people of Armenia and the regions adjacent thereto at the time the deluge occurred.

If we suppose the upper part of the Tigro-Euphrates Valley to have been the original cradle of the human race, and that mankind had spread thence over a large part of Asia, all of Europe, and

¹ *Schaff-Herzog's Encyclopædia.*

the Nile Valley in Africa at the time the deluge occurred; and further, that the emigration implied in this had taken place in a natural way, after violence had begun to fill the earth, the condition of those then living at a distance from the centre of emigration was probably very different from that of Noah, and those who still occupied the original mother-country. The law which governs natural emigration is well stated by the Duke of Argyll, as follows: "It is in consequence of the law of increase that population is always pressing upon the limits of subsistence. Hence the necessity of migrations, and the force which has propelled successive generations of men farther and farther, in ever-widening circles round the original centre or centres of their birth. Then, as it would always be the weaker tribes who would be driven from the ground which had become overstocked, and as the lands to which they went forth were less and less hospitable in climate and productions, the struggle for life would be always harder. And so it always happens in the natural and necessary course of things, that the races which were driven farthest would be the rudest, the most engrossed in the pursuits of mere animal existence. And now, does not this key of principle fit into and explain all the facts? Is it not true that the lowest and rudest tribes in the population of the globe have been found in the farthest extremities of the great continents, and in the distant islands, which would be the last refuge of the victims of violence and misfortune?"¹ Whilst, then, Noah and the people who lived in the old centre of population were in a condition of advanced civilization, it is probably true that the tribes driven into Western Europe and Great Britain had sunk into the lowest savagery when the flood came.

5. *In what way was the deluge brought about?* On this point the Chaldean tradition gives us no information. Moses' account is very remarkable, and worthy our careful study. "In the six hundredth year of Noah's life, in the seventh month, the seventeenth day of the month, the same day were all the fountains of the great deep broken up, and the windows (*marginal*, flood-gates) of heaven were opened, and the rain was upon the earth forty

¹ *Primeval Man*, pp. 161-'3.

days and forty nights." (Gen. vii. 11, 12.) In these words Moses traces the flood, not to the down-pour of rain alone, but to great seismic convulsions as well.

Hugh Miller gives us what, I think, is little more than a translation of the Mosaic record into the language of modern science when he writes: "Let us suppose that the human family, amounting to several millions, were congregated in that tract of country which, eastward from the modern Ararat to far beyond the sea of Aral, includes the original Caucasian centre of the race. Let us suppose that, the hour of judgment having arrived, the land began gradually to sink—as the tract in the Run of Cutch sank in 1819—equally, for forty days at the rate of four hundred feet per day—a rate not twice greater than that at which the tide rises in the Straits of Magellan—and which would have rendered itself apparent as but a persistent inward flowing of the sea. The depression, which, by extending to the Euxine Sea and the Persian Gulf, on the one hand, and the Gulf of Finland on the other, would open up, by three separate channels, 'the fountains of the great deep,' and which includes an area two thousand miles each way, would at the end of the fortieth day be sunk at its centre to the depth of sixteen thousand feet, sufficient to bury the loftiest mountains of the district, and yet have a gradient of declination of but sixteen feet per mile, the contour of its hills and plains would remain apparently what they had been before, and the doomed inhabitants would see but the water rising along the mountain side, and one refuge after another swept away."¹

Fifty years ago no geologist would have found any difficulty in admitting the occurrence of such a seismic convulsion as Moses, interpreted by Hugh Miller, describes in his account of the origin of the flood. Now, however, I will be told "catastrophic geology" is out of date, and the uniformitarianism of Lyell and his disciples has taken its place. To this I reply, if the older geologists made too great use of catastrophe in accounting for the present condition of our earth, Lyell and his school have erred just as far in the other direction, as is evident from the ridiculous conclusions to which uniformitarianism has in some instances led them; *e. g.*, es-

¹ Quoted from *Butler's Bible Work*, Old Testament, Vol. I., p. 240.

timating the age of the Mississippi delta at one hundred thousand years. Beyond all question, in our day seismic convulsions are as much a reality as frost, and river-currents, and glaciers, and as really agents in effecting changes in the earth surface. In the earthquake at Cutch, referred to by Hugh Miller, the movement was felt over an area having a radius of one thousand miles from its centre. The fort and village of Sindree, on the eastern arm of the Indus, were submerged, the sea flowing in by the eastern mouth of the Indus, and in a few hours a tract of land two thousand square miles in area was converted into an inland sea or lagoon. Besides this, if our earth was once a molten mass, such as the sun is to-day—and such is the universal belief of geologists—gradually cooling through the radiation of its heat into space, seismic convulsions must have occurred from time to time, and must have occurred more frequently in early geological ages than now, and the terrible rendings and upheavings of which the older rock-strata give evidence strongly confirm this conclusion.

III. TESTIMONY OF MODERN SCIENCE.

So great a catastrophe as the deluge is represented to have been, it is reasonable to suppose, would leave behind it traces of its occurrence other than the universality of its tradition, some traces upon the surface of the earth itself, such as modern science would take cognizance of. Are there any such traces discoverable in our day? I think there are; and to an examination of these I will now ask the reader's attention.

1. *The present condition of the region over which the deluge extended*, especially of the central portion of that region, seems to indicate its subjection to some such cataclysm as the flood, and that within what geologists would call recent times. "There is a remarkable portion of the globe," writes Hugh Miller, "chiefly on the Asiatic continent, though extending into Europe, and which is nearly equal to all Europe in extent, whose rivers, some of them, the Volga, Oural, Sihon, Kour, and the Amoo, of great size, do not fall into the ocean, but on the contrary, are all turned inward, losing themselves in the eastern part of the tract, in the lakes of a rainless district; in the western part, into such seas as the Caspian

and the Aral. In this region there are extensive districts still under the level of the ocean. Vast plains, white with salt, and charged with sea-shells, show that the Caspian Sea was, at no distant period, greatly more extensive than now."¹

2. *A remarkable break interrupts the early history of the human race as read in the light of anthropological research.* "Accurate examination of the stone implements and other relics of the 'stone men,' together with careful exploration of the deposits in which they are discovered, has led to a division of them into two well-defined classes, not contemporaneous in origin, but divided by a clearly-marked interval of time, which must have been of considerable duration. The discrimination of the implements carries with it a like discrimination of the races which fashioned and used them. The later, or neolithic, race of the stone men are proved by their remains to have differed greatly in habits, tastes, degree of cultivation, and manner of life in general from the palæolithic race; differed, in fact, so radically as to render it highly improbable that the difference was merely due to development. The facts lead to the conclusion that the older race disappeared or became extinct without leaving posterity, and that after a while, long in actual years, although short in geological time, another race, less savage, if less artistic in perception, came in and occupied the vacant lands. There is perhaps no better authority on this point than Mr. J. Geikie, and he writes as follows: 'Between palæolithic and neolithic man there is thus a wide gulf of separation. From a state of utter savagery we pass into one of comparative civilization. Was the neolithic phase of European archaeological history merely developed out of that which characterized palæolithic times? Was the European neolithic man the lineal descendant of his palæolithic predecessor? There is no proof, either direct or indirect, that this was the case. On the contrary, all the evidence points in quite an opposite direction. When neolithic man entered Europe, he came as an agriculturist and a herdsman, and his relics and remains occur again and again immediately above pleistocene deposits, in which we meet with no trace of any higher or better state of human existence than that which is repre-

² Quoted from *Butler's Bible Work*, Old Testament, Vol. I., p. 239.

sented by the savages who contended with the extinct mammalia.⁷
—*Prehistoric Europe*, p. 379.”¹

In the appendix to the last edition of his *Earth and Man*, Sir J. W. Dawson writes: “A point on which Dawkins insists, and which he has admirably illustrated, is the marked distinction between the old paleocosmic men of the gravels and caves and the smaller race, with somewhat differently formed skulls, which succeeded them, after the great subsidence which terminated the second continental period and inaugurated the modern epoch. . . . This race, scattered and overthrown before the dawn of authentic history in Europe by the Celts and other intrusive peoples, was unquestionably that which succeeded the now extinct paleocosmic race, and constituted the men of the so-called neolithic period, which thus connects itself with the modern history of Europe, from which it is not separated by any physical catastrophe like that which divides the older men of the mammoth age, and the widely spread continents of the post-glacial period from our modern days.”

“A most important speculation, arising from the facts recently developed as to prehistoric men, is the possible equivalency with the historic deluge of the great subsidence which closed the residence of paleocosmic men in Europe, as well as that of several of the large mammalia. Lenormant and others have shown that the wide and ancient acceptance of the tradition of the deluge among all the great branches of the human family necessitates the belief that, independently of the Bible history, this great event must be accepted as a historical fact, which very deeply impressed itself upon the minds of all the early nations. Now, if the deluge is to be accepted as historical, and if a similar break interrupts the geological history, separating extinct races from those which still survive, why may we not correlate the two? The misuse of the deluge in the early history of geology, in employing it to account for changes that took place long before the advent of man, certainly should not cause us to neglect its legitimate uses when these arise in the progress of investigation. It is evident, if this correlation be accepted as probable, it must modify many views now held

¹ *The Quarterly Review* for January, 1888.

as to the antiquity of man. In that case, the modern gravel and loess on plateaus and in river valleys, far above the reach of the present floods, may be accounted for, not by the ordinary action of the existing streams, but by the abnormal action of currents of water, diluvial in their character. Further, since the historical deluge cannot have been of very long duration, the physical changes separating the deposits containing the remains of paleocosmic men from those of later date, would be in like manner accounted for, not by the slow process of subsidence, elevation and erosion, but by causes of a more abrupt and cataclysmic character. This subject the writer has referred to in previous publications, and he is glad to see that prominence has recently been given it by so good a geologist as the Duke of Argyll in a late number of the *Contemporary Review*.”¹

In his *Fossil Men*, Sir J. W. Dawson writes: “Huxley adds, ‘The comparatively large cranial capacity of the Neanderthal skull, overlaid though it may be by pithecoïd bony walls, and the completely human proportions of the accompanying limb-bones, together with the very fair development of the Engis skull, clearly indicate that the first traces of the primordial stock, whence man has been derived, need no longer be sought by those who entertain any form of the doctrine of development in the newest tertiaries, but that they may be looked for in an epoch more distant from that of the *Elephas primogenius* than that is from us.’ Another point which strikes us in reading the descriptions, and which deserves the attention of those who have access to the skeletons, is the indication which they present of an extreme longevity. The massive proportions of the body, the great development of the muscular processes, the extreme wearing of the teeth, among a people who predominantly lived on flesh, and not grain, the obliteration of the sutures of the skull, along with indications of the slow ossification of the ends of the long bones, point in this direction, and seem to indicate a slow maturity and great length of life in this most primitive race.”²

3. *The occurrence of a great flood, extending over a large part of Asia and Europe, and this at a comparatively recent date, is*

¹ *The Earth and Man*, pp. 144-’6.

² *Fossil Men*, pp. 194-’8.

now contended for by some of our ablest geologists, in order to account for the destruction of the mammoth and his cotemporaries, and the condition in which his remains are found.

These remains, though most abundant in Siberia, are met with throughout a large part of Europe, as well as on this western continent of ours. "If from Europe, the northwestern corner, including North Britain and Wales, be cut off, and also a southern and central portion of which the Alpine chains are the focus, it may be broadly said that, throughout all the rest of the continent, the remains of the mammoth are more or less plentiful. In some parts the frequency of them is astonishing. Beneath the shallow sea, for instance, between Norfolk and the opposite coast, they are so abundant that, in sailors' talk, the locality goes by the name of the 'burial-ground.' In Lower Suabia, we are told, scarcely a railway cutting, a cellar or a well can be dug without some bone or tooth being unearthed. Belgium is particularly rich in this fossil wealth, and almost equally so are the broad plains of Russia from the White Sea to the Black. Passing eastward from northern Europe we meet the remains of the mammoth profusely scattered over the vast range of Asiatic Siberia. From this region its tusks have long been, and still continue to be, exported in large quantities as fossil ivory; and of some spots, which happen to have been better explored than others, we are told that the soil seems to be almost entirely composed of the bones of the great mammals. What is still more curious, is the fact that, from time to time, as the frozen cliffs, which in many places hem in the rivers, are undermined and break away, there starts out from its icy grave the gigantic beast itself, still clothed in its hairy hide as it roamed the wilds untold millenniums ago, and with its flesh so well preserved in nature's own refrigerator as to furnish a succulent banquet to the prowling carnivora of this degenerate age."

"In so far as Asiatic Siberia is concerned, it is indubitable that, broadly speaking, where the bones and carcasses lie, there the animal died. No theory of subsequent water-carriage can adequately account for the presence of the relics where they are found. Their site, their condition, their enormous quantity, alike repudiate such a solution of the problem. The bones and tusks bear no marks of

detrition, such as would necessarily have been produced had they been swept and rolled along by rivers or floods from more southern lands. They abound in localities to which no streams could have floated them, and are even more plentiful in the elevated clays than along the coast, or in the plains bordering on the rivers. Besides, in not a few cases both the skeletons and carcasses have been found standing upright in their clayey or gravelly sepulchres, showing that the animals had either sunk in the soft sediment, or been engulfed as they stood by the turbid waters, and been frozen in before they could fall over. Some of the remains even exhibit marks of death by suffocation; and what is perhaps still more remarkable, the upright carcasses have been observed to face in a particular direction, as if the animals were overtaken while fleeing from the pursuing flood.”¹

“In New Siberia lie hills two hundred and fifty or three hundred feet high, formed of drift wood. . . Other hills on the same island, and on Kotilnoi, which lies further to the west, are heaped up to an equal height with skeletons of pachyderms, bisons, etc., which are cemented together by frozen sand as well as by strata of ice. . . On the summit of these hills the trunks of trees lie flung upon one another in the wildest confusion, forced upright in spite of gravitation, and with their tops broken off or crushed, as if they had been thrown with great violence from the south on a bank, and then heaped up. . . . It is clear that at the time when these elephants and trunks of trees were heaped up together, one flood extended from the centre of the continent to the farthest barriers existing in the sea as it now is.”²

In view of such facts as these, Mr. Henry H. Howorth, one of the leading scientists of Great Britain at the present day, in his work on *The Mammoth and the Flood*, published in London in 1887, writes: “I believe that the same potent cause which swept away the mammoth and the rhinoceros, the cave-bear and the hyæna from Europe, also swept away palæolithic man, and that this cause was as sudden as it was widespread. . . I submit with every confidence that I have proved the position that the extinction of the

¹ *The Quarterly Review* for January, 1888, pp. 117, 118.

² *Recent Origin of Man*, p. 514.

mammoth in the old world was sudden, and operated over a wide continental area, involving a widespread hecatomb, in which man, as well as other creatures, perished; that this destruction was caused by a flood of waters which passed over the land, drowning the animals, and then burying their remains; and that this catastrophe forms a great break in human continuity, no less than in the biological records of animal life, and is the great divide when history really begins.”¹

With respect to the time of man’s advent upon the earth, a great change has taken place in the opinion of scientists in the last ten or fifteen years. Instead of the hundreds of thousands of years demanded by Lyell and scientists of his school, it is now very generally conceded that a very few thousand will cover the whole period of man’s inhabitation of the earth, in so far as science can throw any light on the subject. Prof. A. Winchell, in his *Walks and Talks in the Geological Field*, published in 1887, writes: “Man’s advent is geologically recent. No report of a human relic has been made by any geologist from any formation below the miocene. No report of miocene or pliocene man has been corroborated by such evidence as to command the sanction of conservative geologists. European man is first a quaternary phenomenon; he dates from the epoch of flooded streams and glacial decline.” (P. 304.) And “the epoch of glacial decline he fixes at from five thousand to eight thousand years ago.” (See pp. 292, 293.) Sir J. W. Dawson, in the last edition of his *Earth and Man*, published in 1887, tells us: “The more recent discoveries, both in Europe and America, tend more and more to limit the absolute antiquity of man, and to place his appearance in the post-glacial age. The recent measurements of the topographical survey of New York have shown that the recession of the Falls of Niagara is so much more rapid than has hitherto been supposed, that the time since the glacial submergence at that place cannot exceed ten thousand years, and was probably much less.” (P. 297.) Some centuries must have elapsed after man’s advent before the deluge, of which science now finds abundant proof, occurred; as is evident from the fact that the remains of antediluvial man are spread over

¹ *The Mammoth and the Flood*, pp. 252-256.

all Europe and a large part of Asia; and thus the date of the 'Flood of the Loess,' or 'the Great Siberian Deluge,' as the flood demanded by modern science has been called, does not differ very materially from that we have seen occasion to assign to the flood of tradition, and that of which Moses gives us the history in the Pentateuch."

CONCLUSION.

In the *Central Presbyterian* of March 7, 1888, Dr. Southall writes: "We suppose there is nothing recorded in the Pentateuch that has given occasion to so much genuine incredulity among students of science as the narrative of the flood; and fifteen years ago in England, in the day of Lyell, and the uniformitarian school of geology which he built up around him, there was a stolid non-recognition on their part of that great geological cataclysm which some American and French geologists already detected in connection with the loess and gravel deposits of the glacial epoch." The correctness of this statement no one acquainted with the scientific literature of the last quarter of a century will call in question. In concluding this article, let us see how the matter stands to-day.

1. *The Flood of the Pentateuch.* The Pentateuch contains the history of a flood, of which it tells us, (1), That it occurred after man had been an inhabitant of the earth for many centuries—1656 A. M., according to Ussher; 2256 A. M., according to Hale; (2), That this flood extended as far as the human race had then extended itself, over a large part of Asia, and probably all of Europe, and so was universal in so far as the then inhabited world was concerned; (3), That at the time of its occurrence man in Central Asia was in a condition of advanced civilization, whilst in Western Europe, to which the "violence which filled the earth" had driven some tribes, he was probably in a savage condition; (4), That this flood occurred some four or five thousand years ago—4226 according to Ussher, 5043 according to Hale—and that at its close God gave assurance that "the waters should no more become a flood to destroy all flesh;" (5), That the immediate physical cause of the flood was "the breaking up of the fountains of the great deep, and the opening the flood-gates of heaven," *i. e.*, great seismic convulsions, accompanied by tremendous rains; (6),

That "the meritorious cause" of the flood was the universal corruption of the human race, Noah and his family alone retaining their integrity; and further, that because of this his character, Noah was forewarned of the approaching flood, and prepared an ark for the saving of himself and family, thus becoming the second head of the race; (7), That at the close of the flood the ark landed Noah in Armenia, which thus became the post-diluvial centre of emigration for mankind; and (8), That after the flood the duration of human life was greatly shortened.

2. *The Flood according to Tradition.* A universal tradition, found among all the different races of men, in all parts of the world, tells us of a great flood which once overspread the then inhabited portion of the earth. Taking this tradition in its most complete form, the form in which it has been handed down by the Chaldeans, it tells us, (1), That this flood occurred long after the creation of man; (2), That it was universal in so far as the world inhabited by man was concerned; (3), That at the time it occurred the inhabitants of Central Asia were a civilized people; (4), That this flood occurred some four or five thousand years ago; (5), That one man, his family and a few friends, alone escaped destruction, and that by means of an ark which they had been forewarned by the gods to build; (6), That at the close of the flood, the ark landed in Armenia, which thus became the post-diluvial centre of emigration for mankind. Of the immediate physical cause of the flood, and of its meritorious cause, tradition says nothing distinctly, and of the promise that this should be the last universal flood it says nothing whatever. This difference in the two accounts is just that which ordinarily distinguishes tradition from authentic history.

3. "*The Flood of the Loess,*" or "*the Great Siberian Deluge.*" Geology tells us of many cataclysms which have occurred in the past, some of them continental in extent, as proved by the sedimentary rock-strata they have deposited. Lyell and his school of geologists taught, that either all these cataclysms occurred before man's advent on earth, or that his advent occurred hundreds of thousands, if not millions, of years ago. This conclusion recent investigation compels us to give up. One flood, at least, has oc-

curred since man was created, as proved by the fact that human remains are found in its sediment; and this flood must have occurred in comparatively recent times, as proved in many ways, especially by the condition in which the remains of animals destroyed are found. This flood is known to geologists as "the Flood of the Loess," or "the Great Siberian Deluge," not meaning by the latter name to limit its extent to Siberia, but because it is in Siberia many of the characteristic evidences of its occurrence are met with.

Respecting this flood it is now ascertained, (1), That, as stated above, it occurred long after man had become an inhabitant of the earth; (2), That it extended over a large part of Asia, and almost all of Europe, as the remains of palæolithic man and the great mammalia which were his cotemporaries prove; (3), That at the time of its occurrence man in Western Europe was in a savage condition, whilst in Central Asia, as indicated by certain bronzes recently found in Southern Siberia, there is some reason to believe that his condition was far in advance of that of the cave-man of France and Great Britain; (4). That this flood occurred some five or six thousand years ago; (5), That the immediate physical cause of the flood was a great seismic convulsion, not a gradual sinking and rising again of a part of the earth's crust, requiring ages for its accomplishment, but a great convulsion, seismic in character; (6), Of the "meritorious cause" of the flood it gives no intimation, unless the debased, savage condition of the cave-men destroyed by it throws some light upon this point; (7), Of the prophecy that "the waters should no more become a flood to destroy all flesh," science tells us nothing as a prophecy; it simply records its fulfilment; for since the flood of the loess, no other general flood has swept the earth. Of the ark and its history it tells us absolutely nothing; but (8), Science does furnish evidence that the life of the antediluvians was much longer than that of man at the present day.

Such are the more important facts in this case, as the matter stands to-day. In this, as in other instances which might be cited, science, after having antagonized the Mosaic history for a time, has quietly drifted around into an almost perfect harmony with it.