

# **Earth History from the Ancient Texts**

**and**

## **It's Relevance to the Science**

KARUNAKAR MARASAKATLA

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### **Summary**

**Ancient descriptions of beginning of the Earth and the global deluge are relevant to the Earth history. Beginning of the Earth or beginning of the time appears to be the beginning of the Supercontinent cycle on the surface of the Earth around 2800 million years ago. Since then, six Supercontinent cycles were completed on the surface of the Earth and the present is the seventh cycle. Global deluge appears to be the description of the rise in sea level occurred with the breakup of each Supercontinent. Therefore global deluge occurs in the beginning of every Supercontinent cycle. Descriptions of the Manvantara cycles, seven Earths and seven Karshvars are similar to the Supercontinent cycles.**

### **Introduction**

Ancient texts of many cultures extensively described about the Earth and the nature. Among them the most prominent and common description was the global deluge. It was mentioned that the global deluge covered all the land mass of the Earth. The present view of the global deluge is that it is a myth. It has been widely assumed that these stories have no relevance to the past history of the Earth. The description of the global deluge is widespread among many ancient cultures on different continents. These ancient beliefs were stamped as myths when the subject of Earth itself was in the conceptual phase. If we analyze these ancient stories in view of the current developments in Earth science, we find extraordinary significance of these stories to the Earth history; far away from the so called myths. It appears that these ancient writings were depicting the real history of the Earth. The views of ancient cultures about the Earth and the global deluge are similar to the Supercontinent cycle (1).

### **Supercontinent Cycle**

Continents were not always separated by oceans on the Earth. Around 270 million years ago (Ma), all the continents were together as a single landmass or Supercontinent called Pangaea. Later this Supercontinent was broken into separate continents and moved apart on the surface of the Earth as they are today. In the future, these continents will again join together to form another Supercontinent. The period from the breakup of one Supercontinent to the breakup of another Supercontinent is one Supercontinent cycle and the phenomenon is called as Plate tectonics.

According to the present concepts, the proto-type of the Earth was formed around 4500 Ma and the life emerged in the oceans after few hundred million years. Even though life existed on Earth from 3800 Ma, trace of terrestrial ecosystems was found only from 2600 Ma. Terrestrial ecosystems could be the result of initiation of Plate tectonics on the planet around 2800 Ma (2) with the breakup of the first Supercontinent. Plate Tectonics can be attributed to the existence of warm habitable environment on the planet. Without the Plate tectonics it will be frigid all around the planet. In the whole history of the Earth, a total of seven Supercontinents were formed since 2800 Ma and each was separated by a period of about 425 million years (My). The past Supercontinent breakup periods falls around 2800, 2375, 1950, 1525, 1100, 675 and 250 Ma (1). Pangaea, the recent seventh Supercontinent was broken into present continents around 250 Ma.

Supercontinental period is very significant part in the Earth history. Even though there were many ice ages in the past, ice ages formed with the Supercontinental formation were extensive and global in nature. Breakup of the Supercontinent causes a severe global warming and melts the ice sheets. Melting ice sheets and the newly formed shallow ocean basins increases the sea level and floods the continental regions. Global warming and the continental flooding cause a major mass extinction. The end Permian mass extinction was the result of the breakup of recent Supercontinent, Pangaea.

There are many similarities between the Supercontinent cycle and the stories of the global deluge from the ancient cultures (1). In the later part of this article, these issues will be explored in detail. Even though the story of the global deluge is part of almost every ancient culture, this article explores only the views described in the ancient texts of Vedic, Hebrew and Zoroastrian cultures.

## **Manvantara Cycles from the Ancient Vedic Texts**

Ancient Indian Vedic texts described the Earth history in terms of Manvantara cycles. There were a total of six complete Manvantara cycles in the history of the Earth and the present is the seventh cycle (3, 4). Each of the cycles begins with a global deluge on the surface of the Earth. In each of the global deluge, Manu saves the species on the Earth in an Ark. There were no species on the Earth before the first deluge therefore the first Manu was described as the first human being. Manvantara is the period between two consecutive Manus and lasts for approximately 308 My. The past six Manus were Swayambhuva Manu, Svarokisha Manu, Auttami Manu, Tamasa Manu, Raivata Manu and Kakshusha Manu. The present Manvantara began with the Vaivaswatha Manu.

According to these texts the age of the Earth turns out to be around 2 billion years (1). Even though there is a difference in time between Manvantara and the Supercontinent cycle, the description appears to be similar to the Supercontinent cycle. More over the Earth was described as revolving around the galactic center within the Manvantara. In fact the same revolution appears to be the cause of Supercontinent cycle or Plate tectonics on the Earth (2). These ancient texts also mentioned that there would be another seven Manvantara cycles apart from the current one, totaling fourteen of them as the total period of the habitable Earth. Appropriate time period for the seven Supercontinent cycles is another 3 billion years and this period is in accordance

with the present standards of the Earth and planetary sciences for the hospitable environment to continue on the Earth before the red giant phase of the Sun.

In these ancient texts it was also mentioned that the period of fourteen Manvantara cycles is a day of Brahma. In this period life exists on the planet. Equal amount of time was described as the night of the Brahma. Life perishes and darkness abounds in this period. A cycle of day and night of the Brahma repeats in the galaxy. These texts even described the galactic scale colonies and the position of our own Earth among them.

## **Seven Earths from the Ancient Hebrew Texts**

Ancient Hebrew texts described about the past six Earths and the present seventh Earth. Each of these Earths was separated by a salty ocean and then a fresh ocean from other Earths. Ancient texts even provided the names for the seven Earths from the lowest as the Erez, Adamah, Arka, Ge, Neshiah, Ziah and Tebel (5). Salinity of the ocean increases from the breakup of the Supercontinent to the formation of another Supercontinent. Breakup of the Supercontinent removes the salt from the ocean in the form of evaporites. As a result the ocean transforms into a fresh water reservoir. As the plates move towards the formation of another Supercontinent, salinity increases in the oceans. In other words, global glaciation and saline oceans dominates the Supercontinental period. Evaporites and the melting of the ice sheets fill the oceans with fresh water after the breakup of the Supercontinent.

It has been described that the Adam was descended from the Eden onto the first Earth when the Earth was formed in the beginning. Later he moved onto the other Earths by crossing the ocean between them. Adam was described as the first human being on the Earth. Global deluge of the Noah's period was described as happened at the end of the sixth Earth and in the beginning of the Seventh Earth. It means the global deluge occurred at the end of the sixth Earth is the same as the salty and fresh oceans which separated each of the previous Earths. As the Noah saved the species in his Ark in the recent global deluge, Adam also can be described as the protector of the species in the previous Earths. Supercontinental breakup and the subsequent extensive flooding of the continental regions cause extensive erosion and sedimentation on the flooded regions of the continents. This newly reshaped landscape was later described as the new Earth in these ancient texts. From these descriptions it appears that each Earth is a single Supercontinent cycle. Even though there were many occurrences of global deluge, emphasis was given to the recent event.

The progressive nature of life can be observed in the environments of each of the previous Earths. Environment on the Erez, the first Earth was dark; it could be possible that the first Supercontinental period received very little radiation from the young Sun or the dense atmosphere might have blocked most of the radiation. Second Earth, the Adamah, where the light reflected from its own sky and the stars and constellations were bigger in size. Size of the galaxy might have been smaller in that period. Stars would appear bigger in size in the compact galaxy. Expanding galaxy might have distanced the stellar objects away from each other. The Arka, third Earth, received some light from the Sun. Increasing brightness of the Sun and the thinner atmosphere might have illuminated the surface of the Earth. The Ziah, sixth Earth was described as a dry land without much water resources. This period is from the breakup of

Rhodinia to the formation of the Pangaea. Gondwanaland formed in the early period of this era and its vast expanse might have had extensive dry land in the interior of the continent. The Tebel, seventh Earth started with the breakup of the Supercontinent, Pangaea. Other descriptions like the emergence of plant life and the appearance of humans in the previous Earths might also be valuable in further exploration of the past Supercontinental environments.

## **Seven Karshvars from the Ancient Zoroastrian Texts**

Ancient Zoroastrian texts described the Karshvars as concentric circles one above the other (6). They described the present Karshvar - Hvaniratha as the seventh and the largest one, above all the previous Karshvars. The other six Karshvars are: Arezahi, Savahi, Fradadhafshu, Vidadhafshu, Vourubaresti, Vourugaresti (7). According to these texts, Hvaniratha is the only Karshvar inhabited by the men. An ocean separated each Karshvar from another. These Karshvars can be compared with the Supercontinent cycles. Global flooding of the continental regions after the breakup of the Supercontinent is the ocean between each of the Karshvars. Sedimentary layers of each Supercontinent cycle forms one above the previous one and in general these layers can be described as the concentric circles.

## **The Beginning**

It is clearly evident that the ancient civilizations considered the breakup of the first Supercontinent around 2800 Ma as the beginning of time. This period was considered as the beginning of the perception of day and night on the Earth. Ancient Vedic texts also mentioned that the stars started moving across the sky in this period. Ancient perception of the beginning is the orderly movement of the celestial objects; not the existence of the objects themselves. Modern perception of time started with the decay of the radioactive elements in the planetesimals, a proto-type of the present planets, around 4500 Ma. Both the perceptions are valid in this scenario, but the period around 2800 Ma is definitely more significant than the period of the Earth around 4500 Ma. Planet has grown bigger in size until 2800 Ma, but remained same after that period. Warm environment, terrestrial ecosystems and beginning of Plate tectonics marks this period as a significant event in the Earth's history.

Apart from the Vedic, Hebrew and Zoroastrian descriptions of the global deluge, many other ancient cultures also believe in the event. Some of them refer to the latest event happened with the breakup of the Pangaea and others probably refer to the breakup of the first Supercontinent around 2800 million years ago. If the story deals with the beginning of time and the formation of the Earth, then it is definitely the description of the first Supercontinental period. If the story is about saving the people in an Ark from the deluge means it is about the recent Supercontinental breakup period. In most cases, the ancient cultures mixed the beginning of time with the latest flood story and didn't provide much detail about the intermediate global deluges. Some of the beliefs in the ancient cultures merely mentions about a global deluge. In any case, the knowledge of global deluge is universal among many cultures.

## **Astonishing Achievement of the Ancient Cultures**

It is surprising to see the description of the Earth as far back as 2800 Ma in the writings of the Bronze Age civilizations. The description of galactic revolution as the cause of the global deluge is itself an astonishing achievement. From these descriptions it can be determined that the ancient civilizations once achieved and possessed extensive knowledge of the nature and the Earth. Subsequently these concepts and events turned into legends through the millennia. Common origin or borrowing from another culture explains the abundance of these stories in many ancient cultures. The similarities between the global deluge and the Supercontinental period should not be studied in reference to the abundance of the story; it should be studied in the context of how and when the ancient cultures first realized these cyclic events happening in the past.

Criticism to the global deluge commonly concentrates on the possibilities of building the Ark, ancestry of the human race, rapid or gradual increase in the sea level and the extent of the continental flooding. In some cases the global deluge was even compared with the flooding of a local river or lake. It is known that the breakup of each Supercontinental period witnessed a higher sea level rise than in any other period. Each of the known episodes of Supercontinental breakup period witnessed a major mass extinction. The questions about the ancestry of the human race, extent of continental flooding and about the Ark are immaterial to accept the broader vision of the ancient cultures about this global deluge. Manvantara cycles, seven Earths and the seven Karshvars are the representation of the Supercontinent cycles on the surface of the Earth. Each of the seven Manus, Adam, Noah and the Ark are the symbol of life and its struggle through the Supercontinent cycles.

Supporters of the ancient texts criticized the science because it opposed the ancient texts. Science termed these texts as baseless. Even in this conflict most people continuously believed in what was believed through the generations. At the end the same Science clearly proved beyond any doubt that these ancient texts were nothing but Science itself.

## **Evolution and the Ancestry of the Human Race**

Even though the fundamental concept of the evolution is widely accepted, concepts about the origin and evolution of the human intelligence do't appear to be convincing. Science ignored the ancient thoughts on the basis of present concepts in the evolutionary biology. Theory of evolution proclaims that the humans evolved through the times. It was generally assumed that the human beings were intellectually developed from the Stone Age through the Bronze Age till to the present Iron Age. In this scenario, all the ancient concepts generally get ignored and eventually turn into mere myths.

In view of this hypothesis, the ancient civilizations appear to be scientifically more advanced than commonly assumed. If the ancient civilizations acquired the knowledge through observation and study of the nature, then we must assume that they were intellectually advanced as early as the Bronze Age. Relating the galactic cycles with the global deluge on the Earth requires the knowledge of celestial dynamics as well as Earth's internal dynamics. This is definitely a result of an advanced state of thinking. If the humans acquired the knowledge through experience then the ancestry of the human race has to go back to the period of first Supercontinental period. In

any case, the concepts of human evolution and the intellectual development of the human race appear to be in conflict with each other.

## **Misunderstanding of the Ancient Texts**

Earliest translations of the Vedic texts underestimated the extent of the subject they were dealing with. All the huge numbers described in the texts for the age of the Earth were thrown away because they were in conflict with the prevailing estimate of 6000 years for the age of the Earth at that time. Because the translations were termed these concepts as myth, they couldn't able to seep into the scientific thought at that time and continuously ignored even in this period.

In some interpretations of the ancient Hebrew texts, Adam was described as a plural identity and sometimes even as a symbol of humanity. In these ancient texts, it was described that the Adam was also crossed the ocean between the sixth and the seventh Earths. Noah, a descendant of the Adam, also crossed the same ocean in his Ark with all other species but Adam was not described as part of the Ark. This means Adam probably represents the identity of the humanity and its survival in the global deluge. In many cases, the ancient texts describe only the prominent individuals of a clan. Sometimes these texts describe these individuals in a sequence even though they were separated by many generations. A period of 6000 years for the age of the Earth derived from the genealogies was not in the spirit of these ancient texts.

Scientific critics continuously termed these ancient thoughts as baseless. In most cases the process of scientific criticism is associated with the selection of the weakest point of the opposite view and falsifying the same. With the falsification of single event the whole subject was termed as false and all the concepts were later ignored. In reality, the ideas ignored were difficult to comprehend with the Science. Most common academic reference to the global deluge described in the Vedic texts is the story of the Manu and the fish. We wouldn't find any discussion about either the two billion years for the age of the Earth or the cyclic occurrences of the global deluge.

Gradual progress of the Science from the past few centuries is also another reason for misunderstanding the ancient texts. Continental drift theory was not even born when the Vedic texts were first translated. In the 1960s, Earth science was developed into Plate tectonics and later extended the concept into the Supercontinent cycle. Galactic revolution and the cyclic occurrence of the global deluge have no meaning in the Earth Science until the concept of Supercontinent cycle was evolved. Science gradually progressed and now has all the basic elements to understand these ancient concepts.

## **Future of the Science**

If this hypothesis and the similarities to the global deluge are true then the other concepts in those texts might also have some relevance to the nature. We need to shed the notion of myth about these ancient stories and start realizing the significance of the concepts to the Science. As we improve our understanding of the nature, we may be getting closure to the concepts described in these ancient texts. It is time to incorporate these time tested notions into the Science. These ancient concepts will open new avenues for the exploration of the nature and provides a common goal and direction for the scattered scientific thought. The concepts like the development of

human intelligence, relevance of the Vedic cyclic universe to the Big Bang world, significance of the Earth in the galactic community are needs to be explored. Science no longer can stand apart from these ancient concepts; the borders around it will gradually melt away.

Science, like a culture, is a collective knowledge. Wide and open availability of the subject is crucial for the future advancement and its survival. Ancient cultures even weaved the scientific concepts with the way of everyday life. Incorporation of the Science into the everyday life increases the chances for its long time survival. Open availability encourages many people to involve in the scientific process. Wider awareness of the nature in the society is the only way for unifying the long departed Science and cultures.

## References and Notes

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Note: This article is the combined and revised version of the pages <http://www.geocities.com/karunakarm/press062501.html> and <http://www.geocities.com/karunakarm/sevenearths.html> posted on 25th June, 2001 at my home page.

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