

EDITORIAL

Plantation for the mother Earth

The Global warming has given high warning to the human being that the living beings on the Earth will be no longer in future. Most of the environmentalists have analysed the future of human being on the Earth as greem instead of green. The green coverage on the Earth has been decreasing rapidly. Ten million hectare of forests has been lost every year.

If it continues then the environment of the Earth will not be sustainable for human beings in near future. Great scientist Stephen Hawking asked the people to search for a new Earth for them in the Universe because of the deteriorating condition of the nature and environment of the Earth.

Many international protocols, laws etc. are coined to reduce global warming but no results are come out, rather the condition of the earth has gone more worse than before.

So what to do!.

The only way to save the Earth is plantation. According to a scientific analysis everyone has to plant sixty five numbers of plants to save the world.

According to the "Matsya purana," a mythological book of Sanatan philosophy of India, one pond is equal to ten wells, one reservoir is equal to ten ponds, ten reservoir is equal to one son and one tree is equal to ten number of sons. This saying was coined at that time when sixty percent of the world was covered by the forests. It is really wonderful that ancient India was teamed with intellectuals of high thinking and foresight.

If we don't follow the path of grow green and go green, then the mother Earth will not be able to carry us on her lap in near future.

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Cantor Set

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Abstract:

The cantor set is an interesting example of an uncountable set of measure zero and has many interesting properties and consequences in the field of set theory, topology and fractal theory. The principal aim of this paper is to introduce a generator of finite sub-sets of the basic cantor set and its generalization to the cantor n-aryset. We compute the fractal dimension of this cantor set. The construction of this set is simple enough. The conclusions drawn from it are very complicated. In this paper we discuss the construction of cantor set.

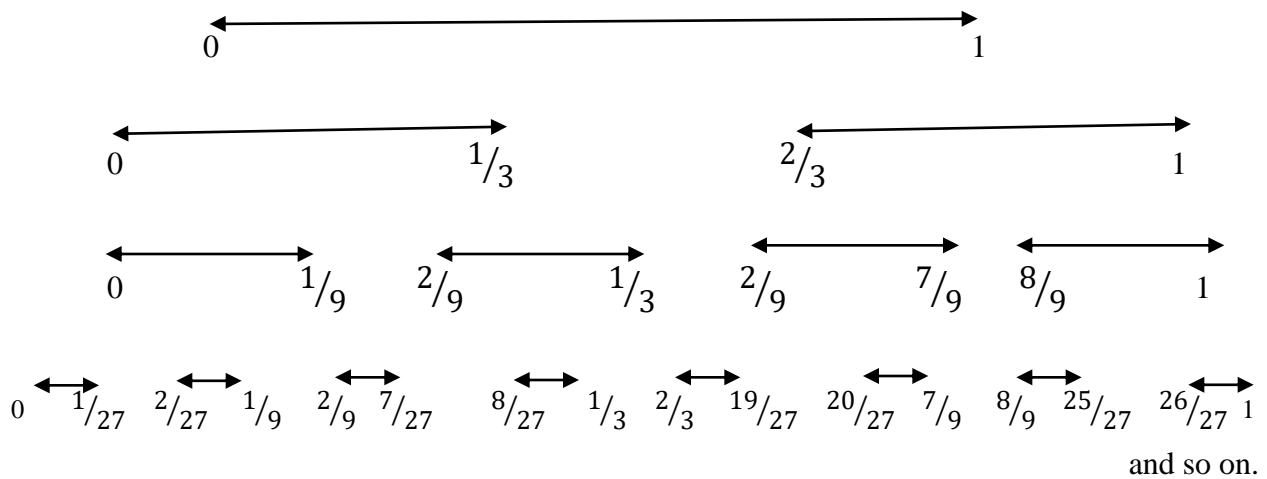
Keywords: Cantor set, ternary set, fractal dimension.

The Cantor Set:

The cantor set also known as ternary set. It was discovered by the great Germany mathematician George Cantor in 1883. The cantor set plays a very important role in many branches of mathematics as set theory, topology, chaotic dynamical system and fractal theory.

Construction of Cantor Set:

To construct this set, we begin with the interval $0 \leq x \leq 1$.



For this we remove the middle third that means the interval $1/3 < x < 2/3$. Also, we have to note that we leave the end points behind, which remain is a pair of intervals each of them one third as long as the original. Now do this again. From each of the remaining intervals, we remove the middle third, that from the intervals $0 \leq x \leq 1/3$

We remove the interval $1/9 < x < 2/9$

Again, from the interval $2/3 \leq x \leq 1$, we remove $7/9 < x < 8/9$. In each case, we left behind the end points. Now for closed interval remain, each of one-ninth as long as the original intervals.

We now repeat this process over and over. Let each stage we remove the middle third of each of the intervals. Thus, we obtain a sequence of closed sets F_n , each of which contains all its success.

Here,

$$F_1 = [0 \quad 1]$$

$$F_2 = [0 \quad 1/3] \cup [2/3 \quad 1]$$

$$F_3 = [0 \quad 1/9] \cup [2/9 \quad 1/3] \cup [2/3 \quad 7/9] \cup [8/9 \quad 1]$$

$$\therefore F_1 \supset F_2 \supset F_3 \supset F_4 \text{ ----- } \supset F_n \text{ -----}$$

The cantor set F is denoted by

$$F = \bigcap_{n=1}^{\infty} F_n$$

Fractal Dimension of Cantor set:

The cantor set is the prototype of a fractal. A fractal is an object which appears similar under varying degrees of magnification. One of the typical features of fractals is their fractal dimension. The fractal dimension is greater than topological dimension. There are many specific dimensions of fractal dimensions. The basic type of fractal dimension is the Hausdorff

Basicovith dimension, which is based on the definition of the Hausdorff measure. One of the dimension formula is given by-

$$D = \frac{\log N}{\log \frac{1}{r}}$$

Where N is the number of self-similar pieces and r is the contraction factor.

Now, we compute the fractal dimension of the cantor set. We have 2^k internals of length $\left(\frac{1}{3}\right)^k$, after k^{th} step.

So, $N = 2^k, r = \left(\frac{1}{3}\right)^k$, . Then

$$D(C(3)) = \frac{\log 2^k}{\log 3^k} = \frac{k \log 2}{k \log 3} = \frac{\log 2}{\log 3} = 0.631$$

The fractal dimension of C(3) is same in every steps.

Conclusion:

- I. At each stage the number of intervals that we are left behind increases, they become small and small quickly. They are $2 = 2^1$ intervals of length $1/3$ after the 1^{st} removed; 2^2 internals of length $1/3^2$ after 2^{nd} , 2^3 interval of length $1/3^3$ after 3^{rd} and so on.
As a result 2^n interval of length $1/3^n$ after n^{th} removed.
- II. The cantor set is totally disconnected.
- III. The cantor set is self similar and therefore it is fractal. To see this take the interval $0 \leq x \leq 1/3$, which remain behind after the first interval is removed. There is a portion of the cantor set contains within this interval. If we explain this portion of the cantor set using microscope that magnifies by a factor of three, then we see that it is an exact replica of the full cantor set. The same thing is true if we magnify the right hand interval by a factor of three. If we now zoom in on any of the intervals remaining at the 2^{nd} stage i.e., $0 \leq x \leq 1/9$, then magnification by a factor of 9 reveals the full cantor set is an exact replica of the whole and hence the cantor set is self similar.

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Heritage of Gelabil Satra of Udalguri District of Assam

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Abstract:

Satra" means a place where the devotees of God meet together and study and share their views with each other. In Assam Satras were established by the Vaishnava saints like Srimonta Sankardeva, Madhadeva, Harideva and their disciples. The Gelabil Satra is also a Vaishnava shrine which is situated in the Udalguri district of Assam (India). The heritage of this Satra reflects Vaishnava culture and literature of medieval period as well as the progressive society lead by Vaishnava philosophy propagated by Sri monta Sankardeva

Key words: Satra, Vaishnava ,Gelabil, Naamghar

Methodology: Literature Search Method, Observation Method

Objective of the study: To unearth the heritage of Gelabil Satra of Udalguri District of Assam.

Introduction:

Gelabil Satra is located in the Gelabil village of Orang Mouja of Udalguri District of Assam. Although the actual year of the establishment of Gelabil Satra is not known, it was assumed that it was established in 17th century by the people of Gelabil village. Of course it was regarded as a Naamghar till 80th decade of 19th century. A group of Vaishnava disciples like late Ghanashyam Das, Dinanath Das etc. who migrated from Barpeta to this place carried a lamp from Barpeta Satra and it was registered as a " Sakha Satra " of Barpeta Satra. Later on it was developed as a Satra institution in the Udalguri District of Assam with the great effort of the people of Gelabil village.

Mythology related to Gelabil Satra:

There is a mythological story related to Gelabil Satra. According to this story a devotee of Gelabil village dreamt a dream that one statue of Lord Vishnu was lying nearby the river of

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the village. In the morning he explained the matter with the villagers and the villagers searched the statue according to the direction of the devotee. They found out the statue and established in the sanctorium of the Naam ghar of the Village. Till then Gelabil Satra has been conserving this statue as mythological heritage.

History of Gelabil Satra:

According to "Gurucharit", the biography of Saint Sankaradeva and Madhavadeva , Sri monta Sankaradeva established Rowta Satra in 15th century which was located nearby Rowta river . But this Satra was washed away by devastating flood. Shrimanta Sankaradeva went away from this place just after six months. The sculptures of the foundation of the Satra were taken by the river current. But after many years this sculptures were found out by the villagers of Gelabil village. At present there is a Rowta Satra at Rowta Station reflecting the past heritage of Sankaradeva established Rowta Satra. But the sculpture of that ancient Rowta Satra has been preserving by the Gelabil Satra.



Gelabil Satra

Culture of Gelabil Satra:

The Gelabil Satra is a Vaishnava Satra which follows the religious philosophy of Srimonta Sankardeva. Vishnu is the prime deity and incarnations of Vishnu like Sri Krishna, Rama are also worshiped as lord Vishnu. . The disciples of the Satra organize *Naam Prasanga* and *Kirtana* everyday morning and evening. They sing *Borgeet*, *Bhotima*, *Totai* etc. and read *Srimobhagwata*. The *pathak* or the reader used to read *Bhagwata* everyday morning and evening.

There is *Beernaama Dal*, who used to perform the *Beernama*. There is one *Ayati Naam Dal* who perform kirtana and Naama, This *Ayati Naam Dal* is consists of the female artists.

The Gelabil Satra organize *Bhaona* in the month of Bohag every year. Bhaona is a religiously performed drama. There are Sutradhara (The prime artist and announcer of Bhaona), Gayana (the singers), Bayana (the music artists) etc. to stage the Bhaona.

Earlier only the male artists performed Bhaona, but at present the female artists also organize Bhaona in this Satra.

There were many persons who contributed a lot in the development of Gelabil Satra culturally. Late Sada oja, a disciple of Barpeta Satra took steps to develop Vaishnava culture in the Gelabil village in six to seven decade of 19th century with the help of late Ghanashyam Das and Dinanath Das. He organized ‘Bhagwata kotha’(Recitation of Bhagawata) in the Naamghar and also in the villagers house. He was the founder of ‘Guru Asana’(A sculpture where holy books are kept) in the Naamghar.

Another person who had great contribution in the cultural development of the Satra was Kamini Mohan Talukdar, popularly known as *Bhagwati mama*. He trained the *Beernaama* or *Thionaama*(A group performance with the song and dances) to the young group of the village with the help of the artists

like Gopal pathak, Pachan Pathak, Jagannath Pathak etc. of Rowta Satra. He taught Borgeet, Naam Prasanga etc. to the people of Gelabil village and organize *Paal Naama*(devotional group song which is performed at least for one day). His contribution is highly acknowledged by the people of Gelabil village.

Late Phatik Hazarika Satradhikar of Mabhpur Satra of Coochbehar visited the Satra many times and lead this Satra religiously for many years during first decade of 20th century. He was followed by Late Lakhikanta Mahanta who visited and lead the Satra religiously for at least ten years after the death of Phatik Hazarika Satradhikar.

Jitenra Nath Pradhani, the President of Asom Satra Mahasabha also took care of this Satra who helped to get government grants for the development of the Satra.



The Gate of Gelabil Satra

Late Sukai Oja, late Modhu koch, late Kanuram Daimary, Raja Daimary , Late Galpa Koch etc. were the core workers of this Satra.

Functions organized by the Gelabil Satra.:

Various religious and cultural functions are organized in the Gelabil Satra every year. In the first day of Bohag it organizes Naam- kirtana and different types of plays. In the first week of Bohag month, the Satra organizes Bhaona. The Satra organizes birth anniversary and death anniversary of Srimonta Sankardeva and Madhava deva . The birth and death anniversary of Kaminimohan Talukdar is also organized by the Satra every year. Magh Bihu, Kati Bihu, Janmastami of Srikrishna are also organized in the Satra.

Conclusion:

Gelabil Satra is not only a religious organization but also a socio cultural organization. It is a leading spiritual organization in the Udalguri District of Assam. It reflects ideal society as dreamt by the saint Srimonta Sankardeva. There is no tradition of Satradhikar at Gelabil Satra , it is run by a committee, where persons from every community can be the member or portfolio holder like president or Secretary of the Satra committee. The different communities like Bodo, Tea tribes, Koch, Kalita, Brahmin etc. have been working cordially together to run the Satra and leading peaceful social life in this village as well as in the surrounding villages. Worth mentioning is that there are about twenty five villages around the Satra who have been supporting and co operating with the people of Gelabil to run the Gelabil Satra.

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5. Sri Padmini Das, Disciple, Gelabil Satra

- 6, Sri Sarat Chandra Barua, Social Worker, Kalbari village
- 7.Sri Ambika Charan Sharma, Ex. Principal Rowta H.S. School
- 8,Sri Kanak Chandra Das, Disciple, Gelabil Satra
- 9, Sri Atul Chandra Nath, Journalist, Orang
- 10.Sri Nikunja Das, Disciple, Gelabil Satra, Tezpur
- 11.Sri Abiram Daimary, Disciple, Gelabil Satra
- 12 . Dr. Manoranjan Das, Disciple, Gelabil Satra ,Guwahati
13. Sri Bhogiram Koch, Disciple, Gelabil Satra , Sonajuli village
14. Sri Bhaskar Thakuria, Disciple, Gelabil Satra , Nalbari village
