

## Sir Jagdish Chandra Bose

First scientist to prove plants and metals too have feelings

- VN Gopalakrishnan

He was the first scientist to prove that plants and metals too have feelings. His experiments showed that plants grow faster in pleasant music and their growth is retarded in noise or harsh sound. He demonstrated that plant tissues under different kinds of stimuli like mechanical, application of heat, electric shock, chemicals and drugs, produce electric response similar to that produced by animal tissues.

DR. Bose was a close friend of Rabindranath Tagore and received much emotional support from him at difficult times. Before seriously taking up scientific investigation, Dr. Bose spent many of his vacations visiting and photographing historic places of scenic beauty, armed with a full-sized camera. Some of his experiences he wrote down in Bengali prose. These, together with some of his other literary addresses and writings, were published in a volume called *Abyakta*. In 1896, Dr. Bose wrote *Niruddeshar Kahini*, the first major work in Bangla science fiction.

JC Bose was born on November 30, 1858 in Mymensingh (now in Bangladesh) as the son of Bhagabanchandra Bose, a Deputy Magistrate and a leader of Brahmo Samaj. His education started in a vernacular school, because his father believed that one must know one's own mother tongue before learning English. He was educated at St. Xavier's School and College and passed the BA in physical sciences in 1879. He wanted to go to England to compete for the Indian Civil Service. However, his father, a civil servant himself, cancelled the plan who wished his son to be a scholar, who would "rule nobody but himself".

In 1880, he went to England and studied medicine at London University, England, for a year but gave it up due to ill-health. Within a year, he moved to Cambridge to take up a scholarship to study Natural Science at Christ's College, Cambridge. In 1885, he returned to India with a B.Sc. degree and Natural Science Tripos (a special course of study at Cambridge) and the same year, he also received the BS degree from London University.

In 1885, Dr. Bose was appointed as officiating professor of physics in Presidency College with a salary half that of his English colleagues. He accepted the job but refused to draw his salary in protest. A year later, he became the Professor of Physical Science. After three years, the college ultimately conceded his demand and was paid full salary from the date he joined the college. He served as a Professor of Physical Science for 30 years teaching and conducting research. The policy of the British government was not conducive to attempts at original research. So he spent his hard-earned money for making experimental equipment. As a teacher Dr. Bose was very popular and engaged the interest of his students by making extensive use of scientific demonstrations. Many of his students at the Presidency College which includes Satyendra Nath Bose and Meghnad Saha became famous in their own fields. He retired as Senior Professor of Physics in 1915 but the Government made him Professor Emeritus on full pay instead of pension.

Later, he founded the Bose Research Institute in November 1917 and became its lifetime director. Rabindranath Tagore also helped him in this venture. "The foundation of an Institute for research in pure science is an event in the history of India", Dr. Bose remarked on the occasion of the foundation day. He later switched over to the study of metals and plants. He was the first scientist to prove that plants and metals too have feelings.

His findings subsequently influenced subjects like physiology, chronobiology, cybernetics, medicine and agriculture. His published books include *Response in the Living and Non-Living* and *The Nervous Mechanism of Plants*.

It proves that the Supreme Soul - The God present everywhere and so,

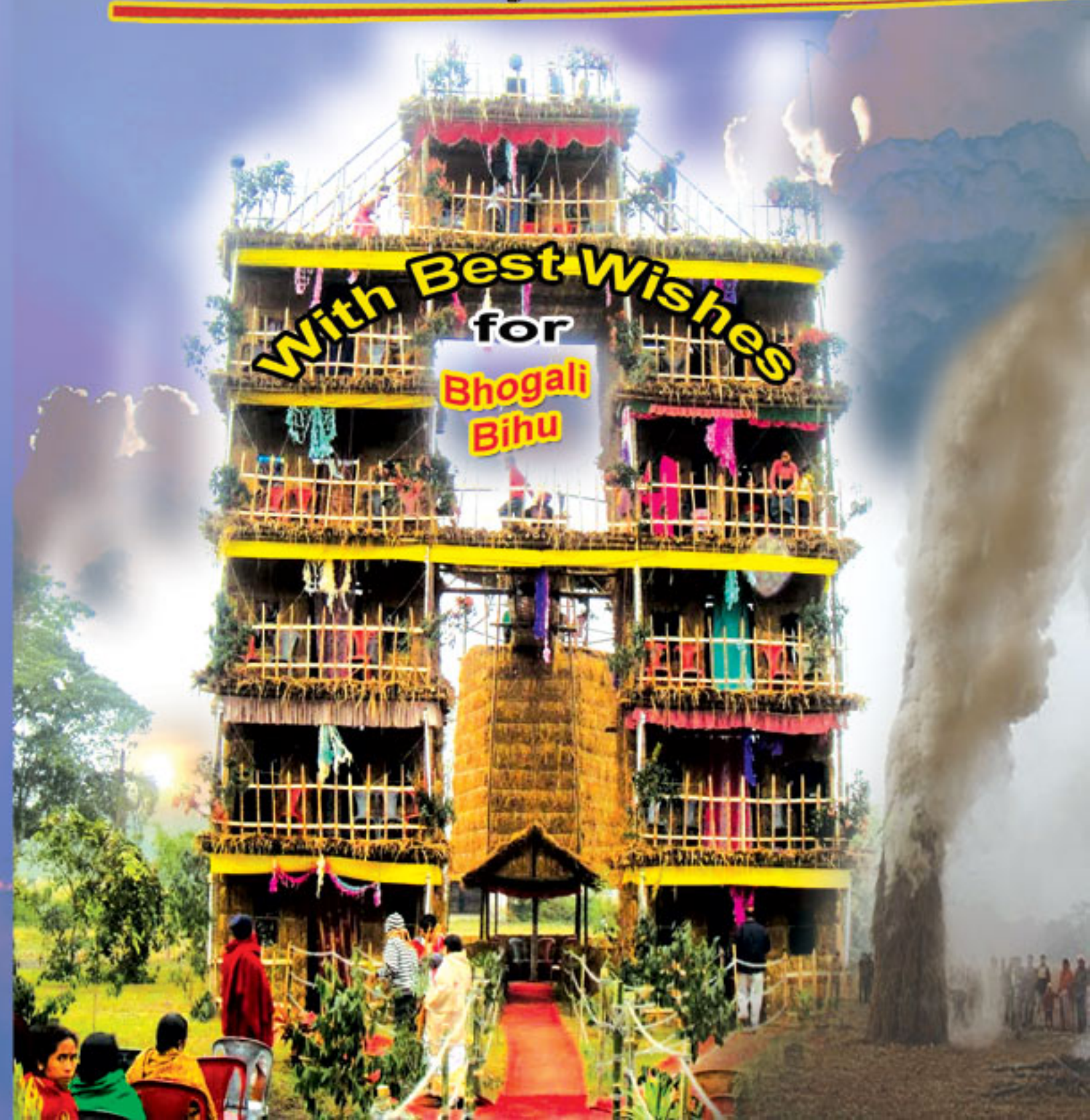
**He is Omnipresent.**



# Heritage Explorer

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Articles on Eternal Faith and Culture and different Socio-Cultural movements in Northeast are invited for publication.

## Magh Bihu Festival of Assam

Magh Bihu is celebrated in the month of January to mark the end of harvesting season. As the granaries are full. This harvesting festival is observed all over Assam. The word Bhogali comes from the word Bhog which means eating and enjoying. The day of Uruka i.e. the eve of sankranti, Bhellaghar and Mejis are made particularly by the menfolk, with bamboo sticks, hay and wood pieces. A community feast is held on the uruka night inside the Bhellaghar which is a makeshift cottage. After preparing and enjoying a feast inside the bhelaghar, men spend the night there and in the early hours of the next morning lit the bhelaghar down. Its ashes are then spread to the fields and the trees to bring luck for a better harvesting in future. Usually it is a small hut like structure but now a days we see more elaborate ones.

On the day of Sankranti or Bihu people gather at their fields at very early hours in the morning. Meji burning is a ritual where fire (Agni) is worshipped.

In the very early hour of the morning, villagers gather near the meji. All the offerings are placed in front of the meji, people light earthen lamps at the base of the meji. Later one of the elders of the community does the honor of lighting up the meji..A thick cloud of smoke soon covers the area. as soon as it is lighted.

As the fire burns one can hear the sound of crackling sound of burning bamboos. While the meji burns people greet and invite each other to their home for eating pithas (cake) and jolpan (snacks).

Once the meji is completely burnt.... they start distributing all the offerings as prasad to the people present there.

The ashes are collected and put on the foreheads as tilak. For the next few days people feast and visit their family and friends.

## SC Admits PIL on Illegal B'deshis in Assam

*The admittance of our PIL by the apex court itself has proved that our allegation that the electoral rolls of Assam have about 41 lakh Bangladeshis is not without substance. Earlier, the State Government had told the apex court that the APW had no locus standi to file such a PIL. However, we told the court that since we are Indians, we have every right to file such a PIL - Abhijit Sarma, APW chairman*

**GUWAHATI, Nov 22:** The Supreme Court today admitted the public interest litigation (PIL) filed by the Assam Public Works (APW) for hearing. In its PIL, the APW has alleged that the electoral rolls in Assam have names of about 41 lakh Bangladeshis, and therefore, a fresh voters list should be prepared in the State before the 2011 Assembly elections. The Supreme Court has also refused to give any more time to the Assam Government to file its affidavit on the ML, stating that no more time can be given to the State Government as the issue is an important one. Today, the State Government failed to file its affidavit before the apex court for the second time, and requested the court for a one-month time,

Talking to The Sentinel from New Delhi today, APW chairman Abhijit Sarma said: "The ML came up for hearing today before a three-member bench comprising Chief Justice SH Kapadia, Justice A Alam and Justice KSP Radhakrishnan. The apex court hasn't fixed the next date of hearing. We'll appeal to the court to fix the next date of hearing of the case as early as possible. In our PIL, we have told the apex court that since the electoral rolls of Assam have names of about 41 lakh Bangladeshis, the rolls should be seized and a fresh one, free from the names of any foreigners, be prepared before the 2011 Assembly elections in the State. In order to make the task of identification of Bangladeshis easier, the Bangladeshis who had entered Assam before the cutoff date, March 25, 1971, should be given Indian citizenship so as to separate them from the lot who entered the State after the cut-off date.'

Sarma further said: "The admittance of our PIL by the apex court itself has proved that our allegation that the electoral rolls of Assam have about 41 lakh Bangladeshis is not without substance. Earlier, the State Government had told the apex court that the APW had no locus standi to file such a PIL. However, we told the court that since we are Indians, we have every right to file such a PIL. We have filed the PIL because we want to solve the problem of illegal immigration from Bangladesh to Assam with the help of the Supreme Court as agitations in the name of deportation of Bangladeshis have cost the State much."

(The Sentinel 22.11.2010)