



Birbal Sahni The country's first Paleobotanist

- Prof. Swapana V. Hajare

Birbal Sahni the founder of palaeobotanical research in India was an Indian botanist, educationalist and renowned geologist. His contribution to Palaeontology and biogeography is of great magnitude and in the field of plant taxonomy, ecology, evolution, and biogeography he made substantial contributions and raised the standard of this disciplines in India.

Palaeobotany is a scientific discipline of ancient plants which studies plant fossils found in sedimentary rocks by examining their fossilized remains. The study of Palaeobotany includes biological information collected through identification, description, and classification of fossil plants and this data provides the knowledge about understanding of the evolution and extinction of plants and plant ecosystem was occurred in ancient times particularly the global geographical and ecological changes . Palaeobotanical studies and research.

In Indian context the great achievement of Birbal Sahni was that he started the Institute of Palaeobotany at Lucknow, later renamed as the Birbal Sahni Institute of Palaeobotany (BSIP) to recognize his determinations in the field Palaeobotany. This was the first Palaeobotany institute in India.

The Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow, is one of the most renowned institutions in Palaeobotany, Palaeoecology and allied disciplines. This institute develops for to explore and develop Palaeobotany



as a science and provide facilities for research in all aspects of plant life in the geological past, including fossil fuels. The BSIP has been established as an autonomous institute under the administrative control of the Department of Science and combines traditional teaching of Palaeobotany with modern teaching facilities uniquely. The Institute is a pioneer in the field of Palaeobotany and seeks to interpret plant life evolution, geological processes involved and environmental evolution through time in its broadest sense. The BSIP dedicated to attain excellence in R&D through an enthusiastic scientific team and creative integrated ideas in basic and applied research. Birbal Sahni made important contributions in the field of Palaeobotany. From his early childhood he took a deep interest in the study of plants. His area of research was anatomy and morphology of the palaeozoic ferns and India's Gondwana formation's fossil plants. Birbal Sahni is acknowledged all over the world for his significant contribution to Palaeobotany.

Birbal Sahni was born on 14th November 1891 at Behra, a small town in Shahpur District (now a part of west Punjab in Pakistan). His father Mr. Ruchi Ram Sahni, a professor of Chemistry at Government College in Lahore was an enthusiastic educationist, a great patriot and a devoted social worker and mother Mrs. Ishar Devi. Ruchi Ram Sahni was a religious lady and was devoted to her family. Birbal Sahni was a brilliant student and achieved many academic distinctions during his student life. He completed his early education at Lahore, first at the Mission and Central Model schools and later at the Government College. After completion of his graduation in 1911 from Punjab University (now in Pakistan) he went to Cambridge University London for higher studies and started his research under the guidance of inspiring teacher Sir Albert Charles Seward. He got first class in Part I of the Natural Sciences Tripos in 1913 and completed Part II of the Tripos in 1915. He was awarded with the degree of Doctor of Science for his research in the field of palaeobotany in 1919 by the London University. After returning to India In 1921 he joined Lucknow University as



Professor of Botany where at he later also established the geology Department and was head of both the departments.

He married to the daughter of Mr. Sundar Das Suri named as Ms Savitri, who was the source of encouragement and strength in his life's achievements as she cherished his dream of establishing an Institute of palaeobotany. Prof. Sahni was very much devoted towards his work. When he was suffer from the diseased condition of cerebral thrombosis, his last thoughts were not for him or for his family but for the newly founded institute and he expressed his intense feeling to his wife before his premature demise "*nourish the institute*".

Birbal Sahni's main ambition was to start palaeobotanical research in India in an organized basis. In the view if this initially he established a museum of plant fossils in 1929. Then he constituted the committee of Indian Palaeobotanists in 1939 named as "The Palaeobotanical Society" and arranged a meeting to coordinate and develop research fields in India. The Governing body of Society was set at 10th September 1946 for the establishment of an Institute of Palaeobotany. This institute was started functioning at the Botany Department, Lucknow University and for such remarkable work Professor Sahni was appointed as Director. Unfortunately Birbal Sahni passed away a week after the foundation stone laying ceremony was conducted, on 10th April 1949 and could not see his cherished dream "The Institute Grow and Develop".

Some achievements of Birbal Sahni -

- Birbal Sahani received the Barclay Medal of the Royal Asiatic Society of Bengal, awarded by Cambridge University in 1936, the Nelson Wright Medal of the Numismatic Society of India in 1945 and the Sir C. R. Reddy National prize in 1947.
- He was honored for his outstanding contributions to Anthropology with the prestigious awards "Padmashree" in 1973 and "Padmabhushan" in 1976.
- For his role of a foreign honorary member he was elected by the American Academy of Arts and



Science. In 1948.

- He was elected as vice president of the 5th and 6th International Botanical Congress held at Cambridge and Amsterdam in 1930 and 1935 respectively.
- He worked for the editorial board of the Botanical Journal *Chronica Botanica*.
- He was elected as fellow of Royal Society of London in 1936.
- In 1940 he was honored as general President of the Indian Science Congress.
- He was a founder fellow of the National Institute of Science Academy (now Indian Science Academy, New Delhi).
- He was the founder of the International Institute of Palaeobotany at Lucknow, which later on known as Birbal Sahni Institute of Palaeobotany to acknowledge his work in this field.
- He was the first Indian scientist who worked on Palaeobotany and also forms a paleobotanical committee to publish research papers.
- He established India's first laboratory for taxonomic research at Lucknow and remained actively engaged in this laboratory until his death.

Palaeobotany studies restores the plant remains from geological deposits, often in combination with paleontological and other earth-science techniques to determine the evolutionary history of vegetation and fossilized plants. Birbal Sahni received multiple awards and was appreciated for his work in various disciplines. He maintained his love for his work in the field of Palaeobotany until his death.

References -

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