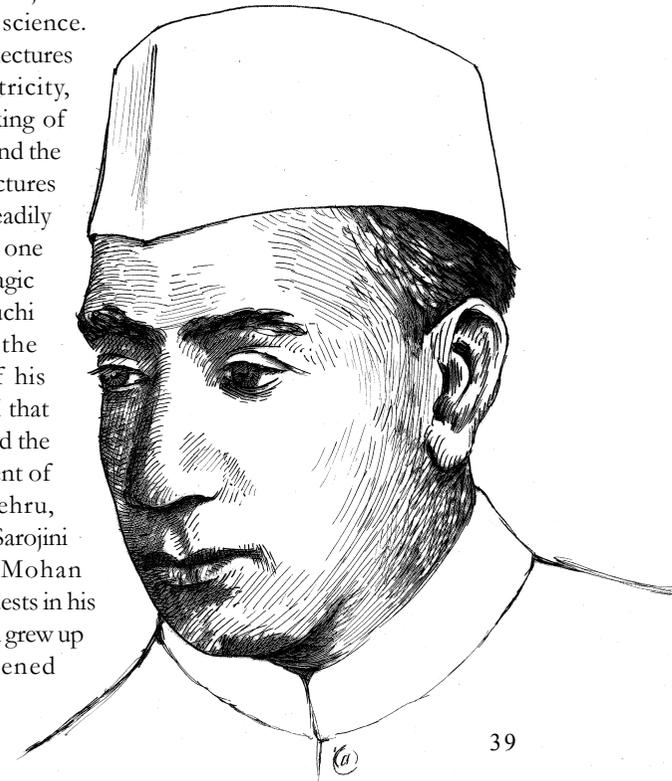




Often the discovery of a rare fossil can change the interpretation of evolutionary history. The person who laid the foundation for fossil research in India was Prof. Birbal Sahni. Early parental influence often shapes a child's personality and mindset. Young Birbal was fortunate in having an inspiring man for his father...Ruchi Ram Sahni who himself was a self-made man. Having worked with some of the greatest names in physics – Rutherford, Thompson and Bohr, he later set up the Punjab Science

Institute to popularize science. Ruchi Ram gave popular lectures on soap bubbles, electricity, magnetism and the working of the telegraph. Rural folk and the lay public attended his lectures in large numbers and readily gave the princely sum of one / two annas to see his magic lecture presentations! Ruchi Ram rebelled against the obscurantist dogmas of his times. He was convinced that education and science held the potential for the upliftment of the masses. Motilal Nehru, Gopal Krishna Gokhale, Sarojini Naidu, and Madan Mohan Malaviya were frequent guests in his Lahore home. Birbal Sahni grew up in such an enlightened environment.

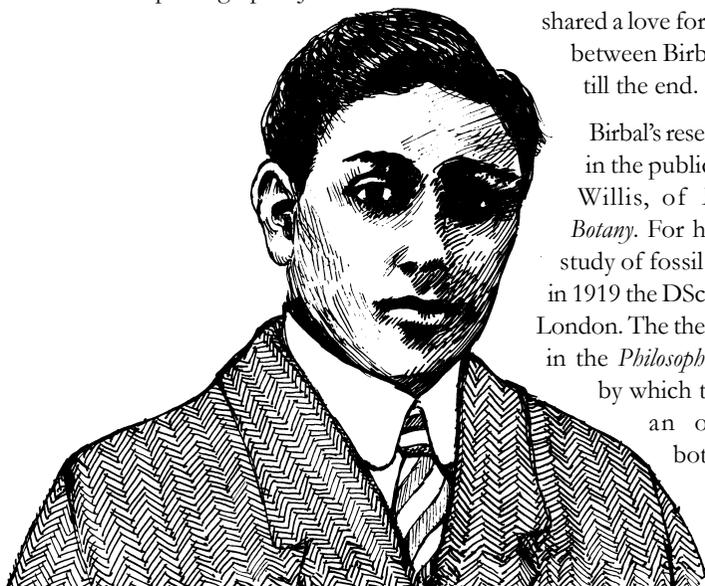


Birbal Sahni was born on 14 November 1891 at Bhera, a small town in, what is now Pakistan. Even as a child he loved adventure. When 14, one day he took his younger brother and sister on a crab collecting mission. Armed with handkerchiefs and empty tins they descended steep ravines, climbed boulders and high cliffs and returned home only at night! But the liberal family took it in its stride. Birbal often accompanied his father on long treks to remote parts of the Himalayas. On these trips he invariably carried Hooker's *Flora Indica*. He spent considerable time identifying plants. Once while traversing the inaccessible Jo Jila Pass, he collected some *red snow*. It later proved to have been formed by a rare, snow inhabiting algae.

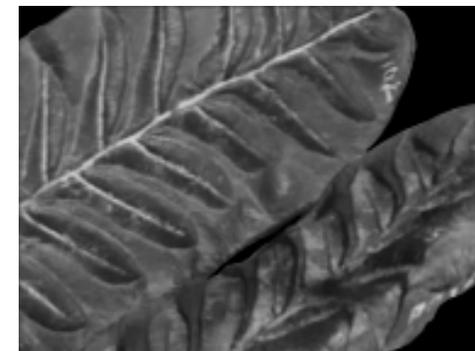
Birbal studied at the Mission and Central Model Schools in Lahore. In 1911 he graduated from the Government College, Lahore, where his father was a professor of chemistry. The same year he left for England and joined the Emmanuel College at Cambridge. He had no recommendations and was admitted on his own merit. But after a while he felt utterly homesick and desperately wanted to return home. But his elder brother – who was then studying medicine in London, persuaded him to return back to studies! After that fateful day Birbal Sahni never looked back and graduated from Cambridge in 1914. Ruchi Ram Sahni was then working in Rutherford's laboratory in Manchester. During vacations the young Birbal helped his father take photographs! Jawaharlal Nehru was his classmate at Cambridge. They both

shared a love for fossils. The friendship between Birbal and Nehru endured till the end.

Birbal's research output culminated in the publication, jointly with J.C. Willis, of *Laswon's Textbook of Botany*. For his contribution to the study of fossil plants, Sahni received in 1919 the DSc from the University of London. The thesis work was published in the *Philosophical Transaction* (1920), by which time Sahni emerged as an original thinker of botany.



While at Cambridge, Birbal developed a deep friendship with his teacher Prof. Seaward. The latter was sent some Indian fossils to study. He returned the specimens saying that Birbal Sahni in India would be the right man to study them! This compliment by Prof Seaward set Birbal on the path of serious research. In 1920 along with Prof Seaward he brought out the *Revision of Indian Gondwana Plants*.



*A plant that lived millions of years ago left its impression, which has been preserved in this rock.*



*By analysing fossils, Birbal Sahni was able to reconstruct what the extinct plant, Williamsonia looked like. It was one of the first flowering plants. (A) the plant; (B) a male flower; (C) a stamen; (D) a male flower of another species; (E) the microsporophyll.*

In 1921, he became the first professor of the newly opened Botany Department at Lucknow University. He would not only give lectures to the BSc classes but also help in practical work and take them for field visits. By this strategy, he could build up a very active school of research in botany. Apart from his profound knowledge he was adept at rapidly drawing excellent sketches, with both hands, on the black board. He was a workaholic and totally immersed himself in work. He could be seen all day and night cutting, grinding and polishing sections of fossils with his hands. Soon he mastered the art of preparing fossil and rock specimens.

He was the first Indian Botanist to be conferred the Fellowship of the Royal Society in 1936. He presided over several sessions of the science congress and was appointed an Honorary Member of the American Academy of Arts & Sciences.

Besides a deep love for science, Sahni pursued several hobbies. He had an abiding love for music and could play the *sitar* and the violin. He loved drawing and clay-modelling in his spare time. He was a chess addict. At school and college, he was keen on hockey and tennis. Being a nationalist he gave up the British attire and mostly wore a *khaddar shermani*. As a child he imbibed a love for Sanskrit which he cherished till the end.

Sahni's research covered almost all aspect of palaeobotany in India. He collected a large number of fossil plants from the Rajmahal Hills of Bihar. Here he discovered a new group of fossil gymnosperms which he named *Pentoxylae*. He was also the founder member of the Indian Botanical Society.

Sahni had wide interests. His work on the *Technique of casting coins in ancient India* won him the Nelson Wright Medal of the Numismatic Society of India in 1945. During his study of fossils he had acquired a thorough knowledge of geology. His research threw light on the age of the Deccan Traps and the timing of the Himalayan uplift.

In 1920, Birbal Sahni was married to Savitri - who remained his constant companion in work and travel. Later he built a house on the banks of the river Gomti in Lucknow. In 1946, he founded a trust to promote research in palaeobotany. Sahni and his wife contributed the initial funds, immovable property, books and fossil collections for the



project. The Palaeo-botanical Society functioned from a single room in the Lucknow University. In 1948, the State government granted a piece of land for the new institute. Its foundation was laid on April 03, 1949 by India's first Prime Minister Jawaharlal Nehru. Birbal Sahni gave an inaugural address on the occasion which also happened to be his last speech. He died barely a week later of a severe heart attack on the midnight of April 09, 1949.

After Birbal Sahni's sudden death his wife Savitri Sahni worked hard to realize her husband's dream. She worked against heavy odds to put the Institute on a sound footing and helped it gain international recognition. For her efforts she was awarded the Padma Shri in 1969. In the same year the Institute was renamed the Birbal Sahni Institute of Palaeobotany in memory of this pioneering scientist.



The Indian Postal Department issued several stamps saluting the work of Birbal Sahni - one species has been named as *Birbalsahnia divyadarshanii*.