

## OBITUARY

PROFESSOR BIRBAL SAHNI, M.A., D.Sc., Sc.D., F.R.S.  
1891-1949

THE cutting short of Birbal Sahni's life at a time when a new epoch of further fruitful activity appeared to be commencing for him came as a painful shock to every one. I had myself sent him a telegram, ten days prior to his death, expressing my confident hope that the newly established Institute of Palæobotany would, under his direction, make valuable contributions to science and to national welfare. At this juncture, when India's science is being reorganized under a new dispensation, Sahni could indeed ill be spared. It is appropriate that *Current Science* should publish appreciations of Sahni's life and career from several India's leading botanists. These naturally contain expressions of their profound sorrow at his being called away in the midst of his work.

I had known Sahni myself for thirty years, having first met him when I was a guest at his father's house in Lahore, delivering a course of lectures at the Punjab University. Since then, we had come together, travelled together and worked together many times and at many places. Every fresh contact only served to strengthen the impression produced on me of a most lovable personality, full of vigour and enthusiasm, and endowed with an unbounded passion as well as a very remarkable capacity for scientific achievement. Amongst the many pleasant memories which I carry in my mind is of my stay on more than one occasion at Lucknow as the guest of the Sahnis in the beautiful home which they built for themselves on the banks of the Goomti river. I cannot help feeling that it was in the highest degree appropriate that it was ultimately decided to locate the Palæobotanical Institute in the city with which the Sahnis were for so many years and so happily associated.

It is scarcely necessary for me to write anything more, except to add that I associate myself fully with all that has been said by his distinguished scientific colleagues in the following pages.

C. V. RAMAN.

IT is my task, honourable yet painful, to pen a few lines about the late Professor Birbal Sahni, Sc.D., F.R.S., both as a man and as seen against the background of science.

But in these few lines I do not propose to present anything like a critical estimate of Prof. Sahni's career, for the simple reason that I stood too near him to be able to possess that aloofness without which no such estimate can be usefully attempted. This very nearness, which disqualifies me to a certain extent, gave me exceptional opportunities to become acquainted with his innermost thoughts and hopes, with his ideals and aspirations, and with the main springs of that magnetic influence, which he exercised on all who came in contact with him.

Born on November 14, 1891 in the Punjab, he was the second son of the late Prof. Ruchi Ram Sahni of the Government College, Lahore. After a distinguished career at the Central Model School and at Government College, Lahore, he left for England in 1911 and joined Emmanuel College, Cambridge. After taking his degree in Natural Sciences tripos with high honours he took up research under the renowned palæobotanist Sir Albert Charles Seward. His inspiring guidance created that love for research in young Sahni which can be found only amongst great masters of a subject. While at Cambridge Sahni received grants from the Royal Society and from his own College in aid of his valuable researches. He remained in England throughout the first World War and in 1919, after his D.Sc. of the London University he returned to India to join the Benares Hindu University as Professor of Botany. In 1920 he left the Hindu University to take up his appointment as Professor of Botany at the Government College, Lahore. But within a year he left Lahore to take up his appointment as Professor of Botany at the newly started University of Lucknow, where he remained till his death. His sudden and untimely death only six days after the laying of the foundation-stone of the Institute of Palæobotany has deprived us of one of the world's greatest botanists.

The first thing that struck any one who came to know Prof. Sahni, was his pure, fervent and profound love for Science. In all my experience, I have met only one other, so utterly absorbed, day and night in thoughts of science and that is Sir C. V. Raman. To these two, India's past was and is a matter of great and legitimate pride,

but even more than the past they thought of the present and future and this was the root of their matchless and astonishing activities in their respective and varied fields of scientific activities.

We all know how faithfully Prof. Sahni lived upto the ideal he set before himself. His was a noble mission, but the cost he had to pay for it was by no means a light one. I do not speak of the sacrifice of physical comfort which it involved, but the mental suffering which he had so often to endure. The present transitional state of our education in general and Science in particular, brought in its wake the conflict between two forms of duties, viz., (a) the duties of the educationist and to scientist to the State and (b) the duties of a true devotee of Science wedded to research. He chose the latter path to which temperamentally he was also suited. For he lived and moved on a plane of his own far removed "from the madding crowd's ignoble strife".

Prof. Sahni's contributions to Botany, Palaeobotany and Geology are mainly of the nature of his own original researches. Many of his extensive memories have been published in the *Philosophical Transactions of the Royal Society* and in various other foreign and Indian Journals. Beginning with some papers on living plants he published extensive papers on the structure and affinities of certain Zygopterid ferns. His detailed work on the revision of the Indian Gondwana plants started with a joint paper published in 1920 in collaboration with his teacher Professor Sir A. C. Seward. In these he not only described a number of entirely new fossil plants but by the employment of improved technique of investigation at his laboratory he was able to revise completely the knowledge about several old species and their geological ranges. Along with these and closely following them came his numerous papers on the structure and affinities of the various Indian fossil plants from the Palaeozoic to the Quarternary beds. In his latest epoch-making paper published just before his death, he founded a new group of Gymnosperms—the Pentoxyleæ.

Besides the morphological and structural aspects of fossil plants he has dealt with the succession and geographical distribution of fossil floras against their climatic, physical and evolutionary background. In addi-

tion Sahni's researches have materially helped to elucidate and solve such vexed geological and palaeobotanical problems as Wegener's theory of continental drift, the age of the Deccan Intertrappean beds now settled as Eocene, the age of the Punjab Saline series now largely recognised as Tertiary, the origin and character of the *Glossopteris* flora during the Palaeozoic ice age and the "Himalayan uplift since the advent of man".

Prof. Sahni had a wonderful faculty of infusing the spirit of research amongst his varied students. And to his students, scattered all over the country, he was like the central sun from whom they derived their light and warmth and round whom they moved each in his own orbit and at his own distance. The feeling of devotion that he was able to inspire was reminiscent of the relationship of *Guru* and *Shishya* found in the ancient culture of India. While we may proudly claim him as our countryman, the discoveries of Science have belonged and must necessarily belong, to the whole world; and Sahni's achievements in Science are a part of the common heritage of all peoples.

In token of his great contribution to science various scientific societies in India and elsewhere showered on him their highest honours. He was made a Fellow of the Royal Society in 1936, was the General President of the Indian Science Congress in 1940 and quite recently he was elected to preside over the forthcoming International Botanical Congress to be held at Stockholm.

His brilliant success in the scientific field was in no small measure due to his charming and devoted wife Shrimati Savitri Sahni. She had been his life-long guide, philosopher and friend. On many occasions she has helped him in the corrections of his numerous papers and later shared a fair proportion of his administrative work connected with the Institute of Palaeobotany. We share with her great loss and pray that God give her the necessary strength to carry through the unfinished task of Prof. Sahni.

I shall now close with a quotation by a great poet:

"Farewell, farewell, a nation's love  
A nation's prayers watch o'er thee,  
Nor space nor time can part thee ever  
From hearts that here adore thee".

SHRI RANJAN.