"I feel I feel that the γ rays proceed from a certain part of the atomic nucleus But I do not know really I do not know Pray do not go away with the belief that they really proceed from that part of the atom With all my efforts I have not been able to trace them back to that particular spot And yet I cannot help saying that somehow or other I *really do feel* that they come from that region and no other

I have referred in general terms to the great event the experimental vindication of the Rutherford Bohr conception of the atom and the incident at Dalton Hall not because I was privileged to be an eye-witness to both of them, but because they reveal the genius of Lord Rutherford (and incidentally, also of Dr Bohr) better than any words of mine can possibly do After this it will be easy to see what the world of science has lost in the death of Lord Rutherford He filled such a large space and led such an active life in the now vast domain of atomic physics that not only his own pupils, who are personally grateful to him for help and encouragement in the course of their own research work, but all earnest students of science must feel pained and grieved that the great master is no more

RUCHI RAM SAHNI

The Modern Study of Plants *

THE Universities may not question the soundness of the view that it is not merely good education but the apotheosis of worldly wisdom to seek first the cultural background and believe that the vocational proficiency will be added unto you But they have not done all they can towards helping the public to appreciate the immense cultural potentialities of scientific thought

In the first place there is the general tendency for technological aspects to grow more obtrusive in Universities Persons connected with professional courses like medicine have been often urging that the preliminary education in Universities should have a more direct bearing on the future profession of the student Secondly, the attitude of the University authorities should lead one to think that they are very favourably disposed towards specialisation In the selection for University posts they are inclined to place undue stress on specialisation instead of placing adequate emphasis on scholarly background versatility of intellectual interest and general culture ' Another serious drawback in University education is the tendency to pay more attention to the acquisition of mere information and to pay no heed to the underlying principles

' Specialisation has come to stay and it is essential that workers in the field of science should have a wide background of culture Any student proceeding to a University degree in science should have an adequate appreciation of the principles of Physics Chemistry, Mathematics especially as regards statistical methods and probability theory and lastly, but by no means least, one biological subject, preferably Botany ' The evils of extreme specialisation can be remedied only through correlation of efforts and the ignorance in one department should not become the limiting factor in our utilisation of our extensive data in others

The value of Botany as an educational subject and its absolute necessity in any system of real cultural development have not been realised by the botanists themselves The educational value of Botany lies in the opportunities it affords for training in observation Plant life has several points of contact with human activity and it is obvious from all points of view that man should know all about the distribution of vegetation and the plant products of everyday use

The several branches of Botany such as Taxonomy, Morphology Anatomy Cytology, Palæobotany, Physiology, Ecology Genetics and so on, have each a distinct contribution to make to the pure science as well as to the applied branches such as Agriculture Horticulture and Sylviculture The retention of Plant Physiology in Botany emphasises the importance of the study of form in relation to function

The results of the study of Ecology have valuable practical applications One cannot ignore ecological aspects in any scheme of land utilisation of catchment areas The land surface covered by forests regulates the water drainage to such a degree that despite extreme fluctuations of rainfall the river levels exhibit no abnormal oscillation, but the effectiveness of the land surface for holding back the water varies according to whether it is under high forests scrub grass land The recent disastrous floods in the Ohio and Mississippi valleys cannot be treated as Acts of God The study of Botany is at once good and useful There is plenty of data to day and it only remains for the Botanist to take his place as a man of affairs and to enlist the support of the public Research is needed in the autocology and biology of cultivated species and it is necessary that the number of posts open to botanists should be increased The best brains should be attracted to the study of Botany

M S SABHESEN

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* Summary of the Presidential Address of Prof E J Salisbury D Sc , F R.S Botany Section, British Association for the Advancement of Science, Nottingham, 1937