SCIENCE NEWS

ANJALI TO PROFESSOR M. O. P. IYENGAR

In an unprecedented gesture, the Madras University celebrated in December 1986 the Birth Centenary of one of their alumni and eminent Professor of Botany who made an indelible mark on the growth of botanical science in the country. The Vice-Chancellor and Members of the Syndicate of the University have initiated a very healthy tradition of honouring their distinguished research professors and we are grateful for this. I have used the beautiful Sanskrit word *Anjali* (=folding the hands and raising to the head in respectful salutation) in preference to 'tribute' as it conveys much more when writing about a *Guru* (a venerable, respectable, beloved teacher). I feel honoured in being asked to write this *Anjali* and I do so with pleasure on behalf of all the research students of Professor Iyengar.

Professor Mandayam Osuri Parthasarathy Iyengar belonged to an orthodox Vaishnavite family, whose ancestors hailed from Mandayam in Karnataka. He was born on December 15, 1886 at Madras. Prof. Iyengar's schooling and collegiate education was all in Madras. He completed his M.A. degree in Botany studying in the Presidency College, Madras in 1909 and entered the Madras Educational Service as Head of the Natural Science Department in the Teachers' College, Madras. In 1920 he rose to the rank of Professor of Botany at the Presidency College and joined hands with Prof. P. F. Fyson, well-known for his contributions to Angiosperm systematics. These two botanists gave together a new dimension to the Department of Botany and attracted students from all over the country. It was in 1920 again that Profs. Iyengar and Fyson spearheaded a move to establish the Indian Botanical Society and started its official organ *Journal of the Indian Botanical Society* which occupies today a pride of place in all leading libraries in the world. Prof. Iyengar edited this journal with distinction for more than a decade and also consolidated its financial position as Treasurer. Many of the research papers that appeared in this journal were early classics from Indian Botanists and are cited even in recent scientific literature, a tribute to Prof. Iyengar's painstaking and critical editorial care.

It was in the 1930s that Prof. Iyengar changed over his research interests from general botany to specialization in the discipline of Algology. The most significant event was his exposure to an international school of algology under the celebrated algologist Prof. F. E. Fritsch at the Queen Mary College, University of London. Prof. Iyengar was awarded the Ph.D. degree in 1932 and soon after he returned to Madras, back to the Presidency College, for a short spell of teaching and research. The big event in the Professor's research career was his moving, in 1933, to the newly created Research Chair in Botany at the University of Madras. This made all the difference as he could concentrate on research projects in his specialized field of algology with very little teaching load and, what was more important, from a prestigious University Chair, in one of the oldest universities, he had frequent contacts with other leading botanists in the country, in particular, with pacemakers like Profs. S. R. Kashyap, Birbal Sahni, P. Parija, S. P. Agharkar and other contemporaries. It was during this most productive period of his scientific career that the Professor emerged as an architect of the real big research school in algology in the country. That he could achieve this in a decade (1933–44) is a tribute to his multi-faceted research programmes delving, at depth, into many problems in algology ranging from morphology, life-histories, cytology to ecology of estuarine algal floras, algal blooms etc.

As Director of Research at the University, Prof. Iyengar gathered round him a devoted band of research workers. He was meticulous in whatever he did and rightly expected the same attitude to science from his research associates. Both in the laboratory and in the field, his observations, were incisive and thorough. Many of the morphological observations made by Prof. Iyengar using the conventional light microscope have not been superseded by electron microscopic observation—a tribute to his keen and alert mind. There was no scientific paper that would go to press unless verified several times. Little wonder, therefore, that the many genera and species

of algae his group erected were undisputed and stood the test of time. Prof. Iyengar strove for academic excellence throughout his scientific career. This was his attitude to plain living and high thinking, a quality to be emulated by our present day academics. With simple equipments they contributed to their chosen areas of science precisely and incisively. With none of the automatic analyzers of today, algal ecology of a high order, in temporary waters and estuarine regions were conducted. It is perhaps difficult to appreciate these pioneering researches in the present day unsatiable demands for sophisticated instrumentation which our younger generation have got so used to. There is a controversy raging in many scientifically advanced countries on whether they are right in allowing school children the use of pocket calculators to the detriment of their developing mental powers of calculation and evaluation. The debate is inconclusive and sharply divided towards pros and cons. To my mind these efforts by the Madras Algal School were shining examples of what clear thinking combined with motivation could achieve under conditions of austerity. It is well to remember also that Prof. Iyengar's University Botany Laboratory was a one man department with just a research assistant. This may appear a difficult proposition in the present context of unlimited expansion of staff in the different disciplines. Many eyebrows will go up even when they are told this!

Among the many genera of algae erected by Prof. Iyengar the genus *Fritschiella* (named after his teacher and research mentor Prof. F. E. Fritsch) occupies a pride of place in the origin and evolution of plant life—a philosophical and speculative thinking by many eminent botanists. Prof. F. O. Bower in his classical treatise, 'Primitive Land Plants' has given this lowly plant *Fritschiella tuberosa* a special status: 'In *Fritschiella*, the crude materials are present for the organization of a higher vegetative development on land, such as the Archegoniatae possess'. In fact, Prof. Fritsch who was physically present at a Symposium in Calcutta in 1938 made these significant remarks: 'Mere description of species until such species were known to be of ecological value, was scarcely the best way of utilizing the abundant energy of the numerous workers on Indian Freshwater Algae. How great a contribution Indian algologists can make to our knowledge of algal morphology is abundantly illustrated by Iyengar's work on *Tetrasporidium*, *Ecballocystis*, *Characiosiphon* etc.' What greater tribute can there be to an Algal School headed by Prof. Iyengar?

I would not like to dwell on the many academic distinctions that came to Prof. Iyengar unsought, as they made little dent on this Naturalist-Philosopher. But I would like to say that to have known Prof. Iyengar was an education in itself. His modesty, his profound sense of humour, his motivation, his truthfulness were all highly priced human traits. As a teacher, whether it was at the graduate level or, while presenting his research findings in a formal lecture, they were unforgettable experiences for those of us who were associated with him for several decades. We had learned to admire Prof. Iyengar's many positive qualities of mind and heart as in them lay the success story of an eminent man of science. We have a very meaningful word in Sanskrit: '*Poornapurusha*' (=complete, full, perfect, integrated man). That is what he was.

Looking back to those eventful years I am tempted to ruminate. Was the research philosophy of those pioneers of small research schools, with modest financial inputs, rigorous discipline, punctilious planning and production of quality research the right approach? Or, should we go in for large sprawling research projects with massive inputs in instrumentation and manpower in keeping with modern trends here and elsewhere? Perhaps, if we had posed these questions to the late lamented Professor, he would have said, with his characteristic withdrawing modesty, that we adopt both philosophies! One thing for certain, Prof. Iyengar's intensely human approach, whether in the art of teaching or as a director of research, has made a lasting impression on many of us. I do hope posterity would draw inspiration from the memory of such a *Guru* we honoured in December 1986.

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