

## T. S. Sadasivan – a centennial remembrance

C. V. Subramanian

He was soft-spoken, quick and firm in action. The glow on his face would disarm anyone. Young in age (31), with his 'call a spade a spade' approach, he seemed to care little for official formalities. When asked by his superior in the Punjab if he had passed the riding test, he reportedly told the British officer: I have no horses to ride on in my laboratory. When I saw him in July 1944, not long after he took over as Director of the University Botany Laboratory (UBL) in Madras and sought to take up research at UBL, after ascertaining my credentials and noting I had a first class first in my graduate Honours degree in Botany studying at the Presidency College, Madras that year, he then and there agreed to take me in. In need of financial support, I was recommended for award of a research studentship. When the Research Assistant mentioned that the Board of Studies in Botany which must approve had already met, he said he had joined later and the application may be circulated to the Board members for approval by the University and added that he must have a student. He then said to me: you can come in and start your work tomorrow.

That was Toppur Seethapathy Sadasivan (22 May 1913–18 August 2001) who succeeded botanist and algologist M O. P. Iyengar, Director, UBL, who had



**Figure 1.** T. S. Sadasivan in South Kensington, London, 1968.

established a school of algology reputed for excellence and internationally acclaimed. He had worked on soil mycology and on plant virology at the Rothamsted Experiment Station at Harpenden in England and earned a PhD from the University of London. He came to UBL accepting the Readership and Directorship of UBL from Lyallpur (now Faisalabad, Pakistan) where he had been working on fruit preservation and canning. He brought with him a number of cultures of yeasts, chiefly *Saccharomyces cerevisiae*. To his pleasant surprise, he found UBL was already well equipped for microbiological work: autoclave, ovens, micromanipulator, Pyrex glassware, almost all basic requirements. That was due to his predecessor's vision of UBL.

He taught me basic microbiological techniques and passed on the yeast collection to be maintained by me. A month or so later, a visit from K M Thomas, then Government Mycologist, Coimbatore, to Sadasivan settled my future in research which in turn settled the research programme Sadasivan would build on at UBL. Mr Thomas suggested to Sadasivan that I study the wilt disease of cotton plants caused by *Fusarium* with special reference to soil conditions and that he would give all help in visiting wilt-infested areas and collecting diseased plant material and infested soil around Coimbatore. Sadasivan unhesitatingly agreed in my presence. Following up the idea, he sent me to Coimbatore to see and collect diseased plants and soil from cotton fields around Udumalpet and Pulankinar, not far from Coimbatore. Thus began my work on soil conditions and cotton wilt which got me a doctorate from the university working under the guidance of Sadasivan. At least twenty more students received their PhD working on various aspects of cotton wilt at UBL. UBL thus became possibly the first ever centre in the country to do soil mycology and soil-borne plant disease in a big way.

In this centennial remembrance, I like to share my impressions and thoughts about Sadasivan with the generation of aspiring learners and teachers of the future. The essence of our long relationship as student and later as a colleague at

UBL was freedom. From day one, assistance, freedom and understanding came spontaneously, ushering in security and confidence in oneself. That is what brings out the best in a person. Given the general outline and scope of the problem to be studied, I could graze as much as I would like to in the pastures of study of cotton wilt. In my case, I chose to investigate the perennation of the pathogen in the soil and ascertain how and why the pathogen persisted in the soil year after year. The freedom given to me, greatly helped me in my objective.

Freedom comes with responsibility. Students become responsible for their thoughts and actions. Responsibility necessitates understanding. It is a chain of meaningful attitudes that freedom creates in many a situation. When an idea struck him, Sadasivan would pass it on to the student. There is no interference with any considered or original plan of the student in the pursuit of his objective. As his first student who successfully completed his doctoral work in the stipulated span of three years, he liked my ways and so it is, I presume, that, over a period of years, I was asked to unofficially help a succession of students in their work and in the preparation of their theses for



**Figure 2.** The author with Sadasivan, London, 1968.

the Ph D degree. In the process, I gained experience without responsibility. I have always thought that this was a measure of his generosity. In such a situation, I could pursue my independent post-doctoral research in UBL unhampered. Indeed, the decade from 1947 to 1958 was one of the most productive in my scientific career. And Sadasivan used to tell me that this was also the golden period of UBL, the period when it really came to be what he thought it should become. This was also the period of minimal or practically no funding other than the meagre annual budget provision of the Department provided by the University. To have been able to gain recognition in these circumstances was all the more encouraging and satisfying. Ten years after my Ph D, Sadasivan prompted and encouraged me to submit my published work as a thesis for the D Sc degree of the University in 1957 which I did, and the thesis earned me the degree the same year. Pertinently, in 1957 Sadasivan was invited to be on the Editorial Board of *Plant Pathology: An Advanced Treatise* edited by J. G. Horsfall and A. E. Dimond and published by the Academic Press, London. 1957 also marked the centenary of the University. Notably, Sadasivan presided over the Botany Section of the Indian Science Congress session held in Madras the following year.

He took the structure to which he came essentially as a clean slate to build on. And he knew how to use a clean slate. It is never easy to build a centre of excellence and he knew it would be prudent on his part to foster research on algae which is what the structure was known for. Iyengar's strong algal research team continued their work as long as they wanted to. Iyengar was his teacher in the Presidency College, Madras and he was provided with every facility to continue his research. The new was built on the old, in fact, on gold. Iyengar who was no narrow botanist continued to vitalize the structure with his frequent visits and interaction with us, the new beginners. Iyengar's association continued until his passing away. As I had originally wanted to do my research on algae with Iyengar, I was very happy about his continued association with UBL, which greatly benefitted me; I had valuable inputs from him in my pursuit of fungal taxonomy. In fact, during this period I had the satisfaction of publishing a paper jointly with him on a new interesting water mould

which he collected and passed on to us for study.

Sadasivan's affable nature, easy accessibility, even temper and helpful attitude endeared him to his students, associates and staff. He always stood by them and supported them and in turn they stood by him and that was how a cohesive group came to exist at UBL. Following the award of doctorates to his first three or four students, students came to him year after year. A few wanted to work in areas not exactly his and, yet he accepted them and supported their work for a doctorate. The laboratory came to be the first of its kind where a few specific pathogen-plant systems were taken up for study such as the fusariose wilt of cotton and the blast disease of rice. Following my work on the autecology of the cotton wilt pathogen in soil which established its soil inhabitant status, many students followed-up and contributed to many other aspects of this soil-borne disease. Likewise, a succession of students investigated the rice blast disease. Gradually, the focus shifted to studying biochemical aspects of host-pathogen interaction in both these diseases. Also, legume-rhizobium interactions came to be investigated. Plant virology was also taken up later. The laboratory attracted graduates in agriculture wanting to work for a doctorate and in due course it became a centre of research in fundamental aspects of plant pathology.

Sadasivan supported me in continuing my post-doctoral work in soil mycology and the taxonomy and ecology of *Fusaria* which are serious pathogens of many important crops. At that time there were few doing *Fusarium* taxonomy in the country and we had to somehow get to the task of identification by self-effort. Given the freedom and support to develop the expertise, I was able to carry on this work and publish my work. Indeed, my papers for publication were peer-reviewed by one of the most distinguished mycologists of the time who recommended publication with minor changes which, of course, were very valid. The reviewer revealed his identity to Sadasivan at one of the Science Congress sessions and Sadasivan was happy. Following post-doctoral research and training in soil mycology and fungal taxonomy at Cambridge and at Kew, appointment to a Senior Lectureship and later Readership enabled me to continue my work at UBL, but now on fungal

taxonomy with the focus on Hyphomycetes.

Sadasivan would not put his name as joint author in any publications of work done under his guidance by his students. On the other hand, he considered that it was his privilege to review the work carried out by students under his guidance. And that is what he did. Naturally, students felt happy that their work was so recognized. He used to tell me: 'after all, they stand or fall by their work.' Sometimes this philosophy was used in deciding whether a paper he was asked to referee for a journal should be recommended for publication or not. As one close to C. V. Raman, he favoured publication in Indian journals and always contributed his best in the editing of Journals such as the *Proceedings of the Indian Academy of Sciences* and the *Journal of the Indian Botanical Society*. His command of English and knowledge of editorial practice did in fact raise the standard of publication in these journals. He wielded his editorial principles and practice meticulously tuned to the best traditions.

In the organization of teaching and curricula at the graduate and post-graduate levels in the colleges affiliated to the University, he, as the Chairman of the Board of Studies, worked towards moving forward and introducing new thinking in keeping with trends that were seen in the scientific temper in the best institutions in the west. With the objective of the ideal in mind, workshops to impart training in teaching methods, and definition of curricula, were organized under his leadership in collaboration with the University Grants Commission. The faculty in some of the Colleges in the city was roped in this endeavour as UBL's expertise lay primarily in algology, mycology and plant pathology. There is little doubt that this contributed significantly to giving teachers in the many colleges affiliated to the University a taste of the new alongside the old, and a confidence to implement what was needed.

Sadasivan held his head high and lived his life befitting his lineage. He was ever prompt in replying to letters, invariably in his own handwriting, if personal. If a student asked for a testimonial, he would immediately write one and send it then and there. And the testimonials were such that the recipient would be happy. Yes, they were a delight to read. An annual summer holiday in the hills, in his home in Kodaikanal, he will

## HISTORICAL NOTES

---

never miss, and was a must. Before going on holiday during the vacation months of May and June, he would ask me to reply to all letters without reference to him as nothing should be kept pending, and he would not like to be disturbed by having to reply while on holiday. He had confidence in my answering letters which I would do just the way he would, and the replies went in his name but signed by me. On his return from holiday I would place all letters and replies before him. This was an annual feature until I left UBL in 1958 to take up the Professorship at IARI, Delhi.

To his close friends and associates at Rothamsted he was 'Sunny.' Photography was his hobby which he kept alive with a Contax and a Leica. He loved wrist watches, fountain pens, electric shavers, of the best brands, an Omega or a Tissot, A Shaeffers or a Mont Blanc, and the like. While in London he would shop in Oxford Street, at Selfridges. He would not smoke or drink. He led a simple life of clean habits, without sophistication. He dressed immaculately, and his polished manners and modest demeanour, and courteous bearing, all combined to earn him the friendship and respect of his contemporaries. These attributes, and his ability as an organizer and doer, brought him membership and chairmanship of committees entrusted with the task of recommending programmes of teaching, training and research aimed at excellence, identification of talent, and

selection of teachers and scientists, besides matters of educational policy. His long innings in the University coincided with the long innings of the University's Vice-Chancellor who inducted him into the University and, with the award of the first doctorate recommended by an independently chosen panel of Examiners from Britain, he was assured of full support from the University. He told me that he had sent a panel of names of distinguished scientists from Britain to evaluate my thesis; however, not one of the names, he said, was accepted. Instead, the Vice-Chancellor chose to send the thesis for evaluation to three other scientists in Britain, equally distinguished. When the thesis was recommended for the award of the doctorate by the independently chosen panel, the Vice-Chancellor immediately, promoted Sadasivan to a full Professorship. The letter declaring me qualified for the degree and the letter of appointment to the Professorship to Sadasivan came on the same day. Thereafter, it was smooth sailing, contributing to confidence in building the structure to which Sadasivan had come.

In the early 1960s, UBL was recognized as a Centre of Advanced Study by the University Grants Commission and substantial financial support for improving facilities and instrumentation flowed in. Several faculty positions became available. Sadasivan always wanted to strengthen mycology and now had a Professorship in the subject, besides one in

algology. UBL was then very well equipped with sophisticated instrumentation and other infrastructural facilities. There was criticism that the laboratory doing plant pathology had no facilities for conducting experiments in the field. A Field Research laboratory was established to fill this lacuna. There was also some criticism that the centre had become a place of inbreeding. It was Sadasivan's conviction that he should keep with him the best among those trained by him in the interest of harmony and the sense of belonging that was ingrained into them. He maintained his posture in the matter and never yielded to pressure from any quarter till the end. Following his retirement, his room was kept entirely for his use, as and when he chose to come in. With his departure, everything changed gradually. For me it was never the same place where I was closely associated with him. The original building constructed in 1930 was itself demolished. And yet, the glory of the golden period of UBL in that building of which I have written in this centennial remembrance will ever remain and cannot be erased.

C. V. SUBRAMANIAN

*A-8 Damayanthi Apts,  
17 South Mada Street,  
Nungambakkam,  
Chennai 600 034, India  
e-mail: cvsutra1952@yahoo.co.in*