

B. G. L. Swamy (1918–1980): a one-man institution

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B. G. L. Swamy was an internationally acknowledged botanist, researcher, teacher, thinker, art historian, painter, cartoonist, music aficionado and above all, a gifted Kannada writer. Hence it is no exaggeration to say that he was less an individual and more a one-man institution. In this, the year of his birth centenary, we offer tribute to this truly multi-faceted personality of the last century who straddled the worlds of arts, science and literature.

A botanist among artists and an artist among botanists

Born on 5 February 1918 to Bhagirathamma and D. V. Gundappa (DVG), philosopher and literary celebrity in Kannada, Swamy grew up in an ambience filled with literati and books. It is, therefore, surprising that he chose to study science at Central College, Bangalore¹. Even so, it is evident that arts and literature had a pervading influence on him. While in college, Swamy took to writing on interesting plants, animals and the principles of genetics, etc. in the leading Kannada dailies of the day. More importantly, he not only took keen interest in the activities of the Karnataka Sangha at the college and served as its secretary, but also wrote a book *Panchakalasha Gopura* in Kannada (published in 1964) humorously describing the activities of the Sangha and the five towering personalities of Kannada literature of the time who influenced him greatly. It was one of these personalities – A. R. Krishna Shastry – who is said to have encouraged Swamy to

choose botany over zoology for his elective subject as the latter involved killing animals. At any rate, Swamy did choose botany as his subject of specialization². Even as a student, Swamy seems to have abhorred ‘learning’ by rote. He wrote a parody in which he compares a student who falls into the trap of rat race merely to score marks with another who spends most of his time in the field studying living systems – the latter perhaps an alter ego of Swamy himself². With hard work and dedication that distinguished him throughout his life, he obtained his B Sc Honours degree from Central College^{2,3}.

If Swamy was radically different from his peers, his father was no less so. ‘What do you want to do now?’ DVG asked him after Swamy finished his graduation⁴. Swamy replied that he was thinking of applying for a teaching position in some college. His father was aghast. ‘God forbid!’, he said in a thoroughly disapproving manner. ‘Just because you learnt a couple of syllables of botany and passed an examination, you think you’re an expert?’. ‘Shouldn’t you first acquire a fund of knowledge before you’re fit enough to teach others?’ he thundered. ‘First acquire that knowledge and we shall discuss rest of the things later.’ Swamy tried to add that if he got a job in a college, he could also do research side by side. ‘Why is a college job necessary to do research?’, his father countered. ‘Can’t you work at home without the burden of teaching, and concentrate on research?’ And so it was that Swamy bought a second-hand microscope, a microtome and other necessary chemicals and glassware, and commenced working on the embryology of orchids (species of *Cymbidium*, *Eulopheia* and *Zeuxine*) at home^{1,3}. It was not long before that he began publishing in prestigious scientific journals such as *New Phytologist*, and *Proceedings of the Indian Academy of Sciences*. The research

also fetched him a D Sc degree from the University of Mysore in 1944 (ref. 3). In some ways, a comparison with Ekalavya of the epic *Mahabharata*, a self-taught person, may not be out of place.

Onward to Harvard

In 1947, Swamy left for the US on a Government of India Fellowship to join the laboratory of Irving Widmar Bailey, one of the foremost plant morphologists of that time, at Harvard University. Bailey and his co-workers were at that time preoccupied with the baffling issue of the origin of angiosperms. Towards this end they were investigating the ‘Ranalean complex’ – an assemblage of plants that included the buttercups and magnolias and their putative relatives – which lacked vessels, possessing only long, tapering scalariform tracheids as water-conducting elements. The question was whether the available knowledge of anatomical and floral characters on these species revealed the nature of the primitive angiosperm plant and its flower? Working on *Amborella*, *Austrobaileya*, *Circidiphyllum* and *Sarcandra*, Swamy made seminal contributions on these issues in Bailey’s laboratory between 1948 and 1953. His work resulted in eight publications, including one entitled ‘The conduplicate carpel of dicotyledons and its initial trends of specialization’ that generated a great deal of interest⁵. Indeed, so impressed was Bailey with Swamy’s work that he described him as ‘the ablest student with whom he had come into contact during 40 years’. Swamy too had great respect for Bailey and named a new plant species, *Sarcandra irvingbaileyi*⁶ (a vessel-less angiosperm belonging to Chloranthaceae from South India) in his honour in 1953. Swamy’s artistic skills were even then well developed: when Bailey was



Pen drawing of B. G. L. Swamy (by Sudhakar Darbe; courtesy: Jogi, *Kannada Prabha*). (Statutory warning: Smoking is injurious to health).

honoured post-retirement by Frans Verdoorn, the editor of *Chronica Botanica*, with a specially prepared volume of his own writings, the chapter headings were cleverly designed with decorative anatomical motifs by Swamy⁷.

Two decades at Presidency College, Madras

Returning to India, Swamy joined Presidency College, Madras (now Chennai) as Chief Professor of Botany in 1953 and worked there until his retirement in 1973. Leading by example, he induced new energy into botany teaching and research, setting up high benchmarks for hard work, dedication and moral rectitude. His insatiable hunger for knowledge and keen intellect soon attracted like-minded colleagues and students to his lab. Before long, his department became a beehive of studies on plant morphology, embryology and anatomy; a series of original publications and critical reviews began to appear regularly in reputed journals in India and abroad. Many of these studies have found their way into reference books on anatomy and embryology across the world. A further outcome of Swamy's accumulated knowledge of teaching and research over 20 years was a textbook entitled *From Flower to Fruit – Embryology of Flowering Plants* co-authored with his student Krishnamurthy⁸.

Swamy's interest on plants had a broad sweep. His expertise on taxonomy was thorough enough to result in the discovery of new taxa. Apart from dedicating a new species to his mentor Bailey as mentioned above, Swamy dedicated another new species – *Ascarina Maheshwarii* (Chloranthaceae) in honour of P. Maheshwari (University of Delhi)⁹. Because of his expertise in taxonomy and anatomy, fresh and dried specimens of plants used to regularly arrive at Swamy's laboratory for identification and classification, and even for forensic analysis. Moreover, he was an outstanding field botanist; his botanical excursions to the Western Ghats with his students were legendary in their popularity, especially owing to his erudite and attractive description of plants in the field. Generations of students were inspired by his vast knowledge of plants in their natural habitats, and the scientific, cultural and historical lores associated with them.

When Swamy had completed a decade of service, the State Government decided to appoint him as the Principal of Presidency College, although he had not applied for the position. Realizing that this was not his cup of tea, he pleaded with the authorities to withdraw the offer. Finding that resistance was useless, he reluctantly took over the reins of administration. After three and a half years of constant struggle with an indifferent and insensitive officialdom and a maladroit administration, he resigned from the position and returned to teaching and research until his superannuation.

A professor sans borders

The art–literature environment in which Swamy grew up left an indelible mark all through his life and shaped him into a polymath: a litterateur, historian, linguist and much more besides being a scientist. He never felt constrained by conventional disciplinary boundaries but felt equally at home in all of them. Besides Kannada and English, he was proficient in Sanskrit, Tamil, Telugu, German and French and had picked up a smattering of Malayalam and Spanish. He was also at ease reading ancient inscriptions and this resulted in a book entitled *Shāsana-galalli Gidamaragalu*¹⁰ (Plants in Inscriptions). His deep study of Tamil classics resulted in a book *Tamilu Talé-gala Naduvé*¹¹ (Among Tamil Heads) that questioned established views on Tamil culture and language. Swamy also translated Tamil books into Kannada: Examples include *Beladingalalli Aralida Mollé Mattu Itara Prabandhagalu*' (translation from U. C. Swaminatha Iyer's essays), *Jnānaratha* (translation from Subramanya Bharati's work), and *Nadédihé Bālou Kāvéri* (translation from Chitti and T. Janakiraman's travelogue on the Cauvery River). He has also written illuminatingly in English on the Nataraja temple at Chidambaram, Tamil Nadu¹². In this work, Swamy argues that the concept of *Ānanda Tāndava*, one among the five parameters depicted in Shiva's cosmic dance (*Tāndava*) originated in Kashmir in the 9th century AD and was imported to Tamil culture.

Swamy was also an excellent painter and caricature artist. Many of his books included beautifully illustrated cartoons and drawings drawn by the author him-

self. He used this expertise in humorously criticizing fellow botanists – whether Indian or abroad – with whose views he differed on technical issues such as the development or phylogeny of plants¹⁰. His caricature style was possibly influenced by the artwork styles of Friz Freleng and Chuck Jones of Warner Brothers¹³ (who created delightful cartoon characters such as Bugs Bunny, Porky Pig, Tweety, Elmer Fudd and Yosemite Sam). Both these artists were blazing new trails when Swamy was working in Bailey's lab at Harvard. The work of Freleng and Jones differed strikingly from that of Walt Disney characters in having huge round eyes and prominent chunky noses¹³.

Swamy took great pleasure in demonstrating how the wonderful patterns and designs of plant cells and tissues as seen through the microscope could be effectively utilized in our daily life, including designs for textiles. When he was awarded the Birbal Sahni Medal in 1978, Swamy delivered a talk on 'The Malady of Plant Morphology' illustrated with slides of beautiful oil paintings specially prepared for the occasion. He presented to B. M. Johri (University of Delhi), a copy of the text of this talk full of limericks and coloured half-tone prints of oil paintings, bound in a brown-paper wrapping. Professor Johri showed this to one of us (S.N.) as a great example of



A cartoon by Prof. B. G. L. Swamy: Besides depicting the style he adopted perhaps from Friz Freleng and Chuck Jones in all his drawings, this cartoon highlights (a) his long engagement with plant embryology and (b) the most consistent theme of self caricature that pervades most of his drawings (courtesy: K. V. Krishnamurthy).

Swamy's originality and creativity. It was certainly among Johri's treasured collections during his lifetime.

Swamy also had a deep knowledge of Carnatic music and was a regular music critic for *The Hindu*. He had learned to play the violin, although he refused to play it in public or even before close friends. Apparently, he had translated Saint Purandara Dāsa's musical compositions into Tamil and arranged to have them rendered in concerts.

Enriching Kannada literature

Perhaps Swamy's greatest and even more lasting contribution is as a science communicator. To our knowledge, no one else has written on India's botanical wealth in any of the Indian languages as interestingly and lucidly as Swamy did in Kannada. His writings are filled with humour and satire, in an inimitable style that is distinctively his own. *Kāleju Ranga* (College Arena), *Kāleju Taranga* (College Waves), *Prādhyāpakana Peethadalli* (On the Professor's Chair), *Hasiru Honnu* (Green Gold) and *Mysuru Diary* hold a mirror to the continuous erosion of academic values in our state-sponsored colleges and universities. One glimpses all the familiar ingredients that contribute to this sorry state: perpetual shortage of funds due to some 'economy measure' enforced by the government; inept, puffed-up officials who couldn't-care-less about education; suspicious management that firmly clings to the belief that teachers and researchers are born to be careless and prodigal with public funds; administration that has an unshakeable faith in the godliness of procedure, and regards the slightest deviation as blasphemy; academically unfit, but politically well-connected teachers interested in everything other than academics; indolent non-academic staff, and students ready to go on strike at the slightest provocation. In all these, mostly autobiographical works, Swamy attacks them with biting sarcasm and lays bare the general apathy that continues to throttle our academic and research institutions. One suspects that Swamy used humour to shield himself in this ambience. Peel away the humour, and Swamy's pain and angst are clearly palpable. One is left wondering as to how he did not succumb to the situation, but emerged with his sanity and integrity intact.

Hasiru Honnu, perhaps the most popular and valued book of Swamy, is about a series of botanical excursions in the forests of the Western Ghats with his students. It is a treasure trove of descriptions, ecology, utilization, conservation, botanical folklores and myths, and allusions to plants in Sanskrit, Kannada and Tamil literature – all narrated in a his typical humorous style. This work won the Central Sahitya Academy Award in 1978; eleven years after DVG won this award in 1967 (incidentally, this is the first father-son duo to be so decorated). There are other works whose main theme concerns plants: *Sākshātkārada Dāriyalli* (On the Road to Realization) is about habit-forming plants or their parts/products (e.g. coffee, tea, betel leaf, tobacco and opium); *Namma Hotteyalli Dakshina America* (South America in our Stomach) describes edible crops introduced from tropical America to India. *Brihadāranyaka* (posthumously published) is about the plant and animal life of the forest.

Retired, not tired

After bidding final adieu to Presidency College, Madras, Swamy spent a short time at Bangalore before being appointed as Visiting Professor at the University of Mysore during 1979–80 in two installments of three and nine months respectively. During the first three months he decided to stay in the University guesthouse. The room was tolerable, but the food was unpalatable due to the liberal use of garlic (the one thing that a usually unfussy Swamy could not abide by) as an ingredient. Since going out of the campus daily for food was impractical in terms of time spent, he kept body and soul together on the strength of 1200 cups of coffee and the same number of cigarettes. In spite of several such personal vicissitudes, Swamy's short sojourn was busy and academically rewarding, resulting in five scientific publications with colleagues in the Botany Department. His experiences on this campus are vividly and humorously captured in *Mysuru Diary* (posthumously published)¹⁴.

A life, less ordinary

Swamy was a free and independent thinker and believed in calling a spade a

spade. Diplomacy was never one of his strengths. He had strong views on many issues relating to plant sciences and was never afraid of taking up a position or defending his opinions. His plain-speaking and often critical remarks on aspects of form and structure of plants, as well as ancient history of Tamil culture and language bruised powerful egos and earned him his share of detractors. His original views also earned him the sobriquet of 'non-conformist' or 'maverick'. Today, it is not uncommon to find professors in shorts on our academic campuses, but back then, dressed in Khakhi shorts and a half-sleeved shirt, and with a pipe on his lips, his unconventional sartorial style was often the object of mirth among colleagues and students. In dress, as in other matters, Swamy was perhaps ahead of his times.

Swamy led a simple unpretentious life. The oeuvre of his work speaks for itself. His life was one of achievement on several fronts, and an inspiration to generations of botanists and writers. His outstanding contributions to botany have motivated his peers and admirers to name several plant species after him. Some examples: *Ascarina swamiyana* A. C. Sm.¹⁵; *Cycas swamyi* Rita Singh & P. Radha (Cycadaceae)¹⁶; *Bulbostylis swamyi* Govind., *Eleocharis swamyi* Govind., *Fimbystylis swamyi* Govind., *Fuirena swamyi* Govind. and *Scleria swamyi* Govind (all Cyperaceae)¹⁷.

Swamy's life was cut short suddenly and prematurely on 1 November 1980 at Mysore. He was just 62, and rearing to give so much more to both science and arts. Alas! That was not to be. In this, the centenary year of his birth, we would do well to stand and salute this truly multifaceted personality, who straddled the worlds of arts, science and literature.

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Correction

Breccia filled inflation clefts on the banks of the Kukadi River near Hanewadi, Ahmednagar District, Maharashtra

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One of the authors name should read as B. S. Manjare *instead* of B. N. Manjare.