

B. K. Nayar (1927–2012)

After a distinguished and vibrant career, one of the foremost pteridologists of the country Bala Krishnan Nayar, passed away on 12 May 2012. Born on 19 September 1927 in the village Aymanam of Kottayam District, Kerala, he started his career as a lecturer in University of Guwahati, Assam (1950–55). Between 1955 and 1970, he worked as a scientist at the National Botanical Research Institute (NBRI), Lucknow. He then became the first Professor of Botany in 1970 at the new University of Calicut when he was 43. He served as a faculty in the University until his formal retirement in 1987, but continued his research activities till the end.

It was during his field trips in Assam that Nayar developed a life-long attachment with ferns and fern allies. Shifting to Lucknow in 1955 as a research assistant, he served as a scientist in different capacities at NBRI, investigating diverse aspects of ferns like anatomy, morphology, palynology and gametophyte development. A comparative study of the vascular organization in pteridophytes, clarifying the probable trends of evolution of stele in lower vascular plants was his special interest. An extensive study of the gametophytes of pteridophytes undertaken by him showed that the gametophyte morphology can be a significant tool in the study of phylogeny and classification of this group of plants.

The fern flora consisting about 12,000 species of pteridophytes are represented by about 1000 species belonging to 195 genera of 70 families in India. The only comprehensive work on the ferns of South India was by R. H. Beddome (1864), wherein he included 271 species recorded by him from South India and Sri Lanka. After this work, the tropical ferns attracted special attention only in the late 1950s when A. Abraham and his large dedicated band of students at Kerala University, Thiruvananthapuram, began studying them. The painstaking cytological investigations on ferns by this team brought out many valuable observations, including the discovery of the largest number of chromosome numbers ever recorded in plants till then.

Many eminent Indian botanists like P. N. Mehra, S. S. Bir, S. P. Khullar and K. K. Dhir were studying the ferns of northern India. In South India, N. C. Nair, P. P. K. Nair and others published a

series of papers on ferns and fern allies, particularly their morphology and palynology. C. A. Ninan carried out the cytological studies of *Psilotum*, *Lycopodium*, *Huperzia*, *Equisetum*, *Osmunda*, *Angiopteris*, *Marattia*, *Ceratopteris*, *Botrychium* and *Ophioglossum*. P. I. Kuriachan contributed to the cytology of *Selaginella*, *Nephrolepis*, *Salvinia*, *Cyathea*, *Marsilea* and some other common ferns. Investigating the ferns of the region, S. S. Bir and K. Vasudeva (1970) recorded 118 species from Palni Hills. V. S. Manickam also specially studied many ferns of the locality.



However, the taxonomy and classification of ferns of tropical South India did not receive the attention they deserved till Nayar began studying the subject. Researches by him and his colleagues on the taxonomy of Indian ferns resulted in the discovery of several new species and new records for India. As an appreciation of his efforts, a number of new species described such as *Pyrrosia nayariana* (Ching, P. and Chandra, S., *Am. Fern J.*) were named in his honour.

Ultimately, as a supplement to Beddome's classic work of 1864, a book entitled *Companion to RH Beddome's Handbook to the Ferns of British India, Ceylon & Malay Peninsula* was published in 1974 by Nayar, updating the current situation of the fern flora of the region and their classification. This companion volume has been proficiently reviewed in detail by the international authority of ferns, R. E. Holttum, Director of the Singapore Botanic Gardens. While investigating the pteridophytes in

the South Asian region, C. R. F. Jenkins recently assessed the rare and threatened status of the ferns of India after consulting Nayar's data (Chandra, S. and Jenkins, C. R. F. *et al.*, 2008).

As a younger member of the academic staff when Nayar was in service at the Calicut University, I can swear that there was never a dull moment for his colleagues! Some of his principles were not popularly admired (also cf. Holttum, 1975). He was appointed as the senior scientist leader of a team of about 20 experts belonging to different disciplines of science by the Government of Kerala to study and report on the flora, fauna and ecology of Silent Valley. After an year's investigation Nayar published his elaborate report for the Government of Kerala in the form of a book entitled *Flora and Fauna of Silent Valley: An Ecological Hyperbole*. In this document it was stated that only 240 flowering plants, with no new or rare species at all occur in the Silent Valley, and that the forest there cannot be considered as a tropical virgin forest. Despite the contrary assessment of other scientists, he daringly continued to defend his own original opinion till his last days (P. V. Madhusoodanan, *Mathrubhumi*, 2012).

Nayar guided several research students in many universities in India. Over 150 research papers and books have been published by him on this subject. He was the founder of the pteridology laboratory at NBRI. In his honour, a collection of research papers on pteridology compiled in the form of a book entitled *Pteridology in the New Millennium* (edited by S. Chandra and M. Srivastava), was released on the eve of the Golden Jubilee Year of NBRI in October 2003.

Nayar was elected a Fellow of the Indian Academy of Sciences, Bangalore (1975), the Linnaean Society of London and as a Distinguished Fellow of the Indian Fern Society (1992). He was honoured with the 2008 Lifetime Achievement Award.

Nayar leaves behind his wife Sharada Devi, two sons and a daughter.

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