

JANAKI AMMAL, THE NOMAD SCIENTIST

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E.K. Janaki Ammal | Photo Credit: Arivarasu M.

Edavaleth Kakkat Janaki Ammal was the first Indian woman to be awarded a Ph.D in the botanical sciences. She received the degree from the University of Michigan , in 1931, where she specialised in plant cytology. This distinction alone must warrant a celebration of her work, but her life and achievements remain largely unknown to us except for a few articles. This, despite the fact that in 1945, Janaki, often referred to as the first Indian woman botanist, co-authored *Chromosome Atlas of Cultivated Plants* that scientists fall back on to this day.

In the 125th year since she was born, readers can look forward to a well-researched biography of this outstanding woman scientist. *Chromosome Woman, Nomad Scientist: E.K. Janaki Ammal, a Life 1897-1984*, by Savithri Preetha Nair, 57, will likely be the first expansive archive-based analytical biography of an Asian woman scientist.

Nair first came across Janaki's name among the list of members for the year 1932 of the Eugenics Society, earlier called the Galton Institute, London. This was the sole Indian name mentioned there, which piqued Nair's curiosity. She describes the moment: "It said E. K. Janaki Ammal, Coimbatore, and I found no other Indian names that year; it would take another 35 years to have anthropologist L.K. Ananthakrishna Iyer's name there."

"Janaki is at last going to be very much visible, she's going to be known," says Nair, who is concerned that some accounts of her life dwell more on her background rather than her science. Nair is a historian of science and an independent researcher based in London and Kerala. She completed her doctorate in 2003 from the School of Oriental and African Studies, University of London, on museums and the shaping of the sciences in India. "The interest has always been in Janaki's mixed-race origin. I think that her work was far more important than all of that."

It has been a long haul for Nair, who spent a third of her writing life looking for Janaki and producing this biography. It was both luck and a lot of forensic searching, sometimes serendipitous, that led the author to archival material on the scientist who was born in 1897, in Thalassery, in the erstwhile Malabar region, part of the Madras Presidency. Janaki studied at the Queen Mary's College and Presidency College, Madras and taught at the Women's Christian College in the city for five years, with breaks.

While the letters Janaki received have not been preserved, much of her correspondence with people have been archived in repositories. "She was very witty," says Nair, describing her spirit. "She had a wonderful style of writing, and she always brought in fairy tales," she recalls, citing an occasion when the botanist called herself the Cinderella of the Sugarcane Breeding Institute in Coimbatore. "That's how she felt when she was vindicated years later, when a sugarcane and maize hybrid, which she had crafted — that scientists at the institute doubted — flowered. They had thought it was not a genuine cross." She chose this combination as a challenge to produce a difficult inter-generic cross.

Such crosses are developed to produce plants with advantageous properties derived from both parents. This particular cross was no mean task, and involved cross-pollinating thousands of flowers of sugarcane with maize. However, Janaki was denied the credit for this. "You can read her letters where she is vitriolic about people such as the influential agronomist T.S. Venkataraman and several others," says Nair. Pointing to her sense of humour, Nair says, "She

would proclaim: 'Don't I deserve an FRS?' It was meant as a joke but it had so much anger behind it."

Janaki, who passed away at the age of 87, faced sexism, casteism and racism. Despite having influential friends — Fellows of the Royal Society, Nehru, and others — recognition eluded her. She was given a Padma Shri only when she was in her eighties, in 1977. Savitri Sahni, an administrator was awarded the Padma Shri in 1969; and Asima Chatterjee, a chemist, who had only finished her doctorate in the 1940s and did not have the kind of research output Janaki had, was honoured with the award earlier, observes Nair.

Janaki chose to be a nomad both in the way she led her life, and in her science, in order to counter patriarchal shackles. Nair describes this: "Each time she felt that she could not operate within the system, which was a very regimented kind of space, dictated by the state's aims or objectives, she would open a line of flight... This could be either as simple as going on an excursion, visiting sanctuaries and forests, collecting primitive cultivars. She wanted solitude, and yet she needed a job. The only places she could find a job at that point were male bastions, invariably reeking of Brahmanism. She thrived in this tension between the security of a job and freedom. With freedom went instability, but she ultimately decided to live an unstable nomadic life rather than be a state scientist."

When speaking of her own approach to the history of science, the author says she does not see an interest in the subject in India. We look at laboratories but not at museums or at epistemic communities such as the science congresses, she says. Museums and science congresses are important because unlike labs, they are inclusive, public places.

Janaki passionately lent her voice to environmental movements to save indigenous plants, and though accolades did not come her way till late in her life, her calibre was known to the builders of independent India: she was invited to reorganise the Botanical Survey of India by none other than Jawaharlal Nehru. The book promises to unearth unknown nuggets about an unacknowledged woman scientist.

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