

Williams, (John) Trevor

(1938–2015)

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Williams, (John) Trevor (1938–2015), plant biologist and genetic resources conservationist, was born on 21 June 1938 at Pendle, 70 Pensby Road, Thingwall, Wirral, the younger child of Richard Williams (1909–1997) and his wife Kathleen Irene, *née* Turner (1906–2003), both civil servants. In 1942 he was evacuated to the Isle of Man and attended primary school in Douglas and Onchan, before returning to Thingwall in 1946. In 1948 the family moved to Cheadle, Cheshire, where he continued his education at Etchells Primary School before transferring to Moseley Hall Grammar School in 1949. He won an open exhibition to Selwyn College, Cambridge, graduating in 1959 with a BA in natural sciences (taking his MA in 1963). He then joined population biologist John L. Harper at the University College of North Wales, Bangor, completing his PhD in 1962 with a dissertation on the weed biology of *Chenopodium* L. species. From 1964 he studied with Heinz Ellenberg at the Geobotanical Institute, ETH Zürich, and was awarded the Dr. sc. nat. degree in 1968 for a dissertation on the nitrogen relations and ecology of fertilized wet meadows in Switzerland, southern Germany, and France.

Between Bangor and ETH, Williams lectured at Goldsmith's College, University of London, and, on his return from Switzerland, at Lanchester Polytechnic, Coventry. In 1969 he was recruited by the University of Birmingham as a lecturer in the Department of Botany, and course tutor for the graduate MSc course in 'Conservation and Utilization of Plant Genetic Resources' that had recently been founded by J. G. Hawkes. This was the beginning of Williams's foray into the world of plant genetic resources, to which he was to make such an important contribution over the next three decades. He was a whirlwind of energy, an inspirational teacher and mentor, who encouraged many students to follow a career in genetic conservation. Many went on to become leaders of their own national genetic resources programmes.

In 1976 Williams was seconded for two years to the International Board for Plant Genetic Resources (IBPGR) as senior genetic resources officer in the Crop Ecology and Genetic Resources Unit of the Food and Agriculture Organization in Rome, home to IBPGR since its foundation in 1974. He resigned from the University of Birmingham in June 1978 when he was appointed IBPGR executive secretary, then director-general.

Funded by the Consultative Group on International Agricultural Research, IBPGR's mandate was to advance the conservation and use of plant genetic resources for food and agriculture. This was a decade or so after the launch of the 'Green Revolution', and many traditional crop varieties were in danger of extinction as farmers adopted higher-yielding varieties in their stead. When IBPGR began its operations, there was a handful of genebanks across the globe where germplasm could be safely stored, and few germplasm collecting missions had been made to collect germplasm systematically from farmers' fields.

Under Williams's dynamic leadership, many countries were helped to set up genetic resources programmes. In turn, as genetic resources conservation became widely recognized as an important component of enhanced food security, demands for training and research on different conservation approaches increased. IBPGR supported over 800 collecting trips in more than 100 countries, and some 211,000 germplasm samples were placed in genebanks around the world. IBPGR sponsored many scholars from developing countries to study the theory and practice of plant genetic conservation and use at the University of Birmingham, and provided practical training at a number of genebanks.

The application of information technology and databases to manage germplasm collections was another initiative that prospered under Williams's direction. IBPGR also established a Seed Handling Unit at Kew Gardens' outpost at Wakehurst Place, West Sussex, in 1988 (followed, in subsequent years, by units at the National University of Singapore and at the Centro Agronómico Tropical de Investigación y Enseñanza in Turrialba, Costa Rica) to process seeds from collecting missions sponsored by IBPGR, and prepare them for long-term conservation in a designated genebank. Williams also championed development of a research capability within IBPGR, and specialists on genetic diversity, seed physiology, germplasm health, *in vitro* conservation, and data management were recruited, and research networks initiated in partnership with national scientists in many countries.

In 1990 the board of trustees opted for a change of leadership to guide IBPGR's transition to a new institute, the International Plant Genetic Resources Institute, independent of the Food and Agriculture Organization, to address the emerging challenges of access to and use of germplasm, and develop better relations with activist NGOs. Williams stepped down as director-general. By then, however, his legacy was firmly established. There were hundreds of genebank collections worldwide, as well as national capacity and technical expertise to manage these valuable resources. Later, deep beneath the Arctic permafrost on the island of Spitsbergen, millions of seeds from these genebanks were stored for posterity in the Svalbard Global Seed Vault. The opening of the vault in 2008 came three decades after IBPGR first proposed setting up a permafrost genebank for these important germplasm collections.

After leaving IBPGR Williams moved to Washington, DC, as director of the Tropical Trees Program of the International Fund for Agricultural Research, through which he became a scientific and policy adviser to the Bamboo and Rattan Research Network in Asia. In 1991 he was asked to lead a study team to review bamboo and rattan research needs for the next decade, and formed a working group on genetic resources, under the auspices of the International Plant Genetic Resources Institute. His genetic resources interests also expanded to encompass underutilized crops, and he helped found the Centre for Underutilised Crops at the University of Southampton, joining its board and being chair from 1998 to 2005. For many years he advised the management of *Diversity*, a magazine published for the genetic resources community. He was a prolific writer on all aspects of genetic resources conservation and use, co-authoring or editing nine books, and over 100 scientific papers.

Trevor Williams was an outstanding scientist with a broad appreciation and knowledge of botany and genetics applied to crop development. He guided IBPGR from 1978 to 1990 with strong scientific and political leadership, building a dedicated team that made significant contributions to genetic resources collection and genebank management. He also made many other important contributions to genetic resources conservation, and to education and scholarship. Among his awards were an honorary

professorship at the University of Birmingham (1984); the Jubilee medal (1977) of the National Agrarian University, Lima, Peru; a certificate of honour for scientific excellence from Thailand (1984); a certificate of commendation from Argentina's Agricultural Veterinary Academy, for services to maize breeding in Latin America (also 1984); and two Vavilov medals (in 1987 and 1990) from the All-Union Academy of Agricultural Sciences of the former USSR. He was a fellow of the Institute of Biology and the Linnean Society, and served on the council of the British Ecological Society for four years from 1970. Between 1984 and 1986 he served as chair of the International Center Directors' Committee of the Consultative Group on International Agricultural Research.

Williams died at his home, 18 Dawson Road, Heald Green, Cheadle, Cheshire, on 30 March 2015, from chronic obstructive pulmonary disease. He had a deep Christian faith, and at the time of his death was working on a definitive account of plants in the *Bible*. He was survived by his elder sister, the Revd Wendy Williams. He was unmarried.

Sources

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