Mary Elizabeth White AM

5 January 1926 –5 August 2018

Mary White was born in South Africa to an entomologist father and a botanist mother, but spent most of her early years in Southern Rhodesia (now Zimbabwe), where her father was First Director of Agriculture and Professor of Entomology. She attended the University of Cape Town, where she studied botany and zoology. When looking for a subject for her Masters' thesis, Alexander du Toit recommended a paleobotanical subject, as there was no paleobotanist in Africa but it had Gondwanan fossil flora awaiting study. This eventually led to Mary's lifetime interest in Gondwana and the evolution of its biota.

Mary married geologist Bill White, and with several children the family moved to Australia in 1955 and came to Canberra via Fremantle and Sydney. While spending three days in Fremantle, the family hired a car and went bush. There, Mary was struck by the similarities between the floras of WA and South Africa, and from that time on, she became convinced of the reality of continental drift and the concept of Gondwana.

From 1956 until the 1980s, while working for the Bureau of Mineral Resources (BMR), Mary provided paleobotanical identifications for numerous BMR records, reports and bulletins that emerged from the major campaign to complete the 1:250 000-scale geological mapping of Australia. Hidden among these reports are important discoveries and collections made by the field geologists of the time. These include some of the earliest records of Mesozoic bennettitalean and Permian glossopterid reproductive structures from Australia, diverse suites of Carboniferous clubmoss stems that remain little studied, and some of the few plant fossils ever documented from Papua New Guinea. Her work also revealed a wealth of fossiliferous localities from sedimentary basins across Australia and Antarctica that were to become the targets of research by many later workers.

Mary's most significant paleobotanical contributions are arguably those dealing with the fossil reproductive structures of the extinct Permian glossopterid plants of the Bowen and Sydney basins, her research on the morphology of the Permian conifer *Walkomiella*, her revision of the Jurassic Talbragar Fossil Fish Bed flora, and her work piecing together the isolated components of the Early Triassic clubmoss *Cyclomeia undulata*. Mary also documented the first plant fossils from the Prince Charles Mountains in East Antarctica, identifying the remains of glossopterid seed-plants that confirmed a Permian age for part of the Lambert Graben succession. Mary's work on the glossopterids – that iconic group of Gondwanan plants that contributed much of the organic matter to Australia's Permian coals – revealed a great diversity of reproductive architectures in this group that had hitherto not been documented in Australian fossil floras. Her revision of the Jurassic Talbragar flora from central NSW, building on the initial study of that deposit by Arthur Bache Walkom in the 1920s, revealed several new seed and pollen-bearing cones within the assemblage and her work was notable for the attempt to link the various isolated fossil organs into 'whole-plant' reconstructions.

Following her work at BMR, Mary dedicated significant time to organising the plant fossil collections at the Australian Museum (Sydney). After her husband Bill died in 1981, Mary started to write and used the broad knowledge of the Australian fossil flora gained through her BMR reports and her curatorial work to compile a series of popular science books on the evolution of the continent's flora and fauna. Mary's professional association with the brilliant wildlife photographer Jim Frazier, who produced stunning photographs of fossils mainly from the Australian Museum and Geoscience Australia collections, contributed greatly to the critical and commercial success of these books. Mary's paleobotanical legacy will be the extensive series of publications that revealed the great geographic and stratigraphic scope of Australia's fossil floras, and her popular science books that brought the evolution of the Australian flora into the broader public eye.

Mary's later publications drew attention to issues of land degradation and water management in Australia. Her final major publication encompassed the whole gamut of the evolution of life on Earth, at the same time weaving a thread of conservation and land management issues through her writings.

In 2003, at the age of 77, Mary purchased her dream: Falls Forest Retreat, a small country resort near Johns River, just north of Taree in NSW. She immediately set about covenanting 73 of the 81 hectares as a biodiversity and rainforest sanctuary, protecting it in perpetuity by a voluntary conservation agreement. Unfortunately, Mary had to leave the property and in 2016 moved into an aged care facility after having a stroke and suffering with vascular dementia. It was at this aged care facility in Bundanoon, southwest of Sydney, where she died at the age of 92.

Mary won numerous awards, including a Member (AM) of the General Division of the Order of Australia in 2009. Macquarie University bestowed her with a DSc in 1995; Queensland University of Technology granted her a Doctorate of the University in 1998; the University of Wollongong bestowed a DSc in 2001; the Riversleigh Society granted her Riversleigh Medal in 1999; the Australian and New Zealand Association for the Advancement of Science awarded the Mueller Medal in 2001; and her book '*After the Greening – the Browning of Australia*' won an Australian Museum Eureka Prize in 1994.

Mary will be fondly remembered by all who worked with her, but it is her books that will live long in the memory. I expect most Australian botanists and paleobotanists – or paleontologists for that matter – would have copies of at least some of her books.

JOHN LAURIE and STEPHEN McLOUGHLIN