

## Dr Vivienne Cassie-Cooper (26 September 1926 – 5 July 2021) - biographical information

*The Dr Vivienne Cassie-Cooper Award comprises \$5,000 over two years and enables women to return to study (full-time or part-time) having spent time since graduation caring for whanau or family members, or in the paid or voluntary workforce.*



Dr Vivienne Cassie-Cooper was a pioneer women scientist, who battled social attitudes and stereotypes in producing her major work on New Zealand algae. She notes in an account of her life and career that a picture of her at age two climbing a stile on Waiheke Island (Little Everest) was symbolic, for she has been climbing stiles all her life.

Una Vivienne Dellow was born in Epsom in September 1926 and educated at Epsom and Takapuna Primary Schools and Takapuna Grammar (where her father was the principal). She completed a Bachelor of Arts, majoring in Biology and Music, at Auckland University College (now The University of Auckland) in 1947. Vivienne was awarded a Senior Scholarship in Biology and graduated Master of Arts with First Class Honours in 1949, as well as co-winning the Fowlds Memorial Prize for the top graduate of that year.

A Research Fellowship Fund enabled Vivienne to study for her PhD full time. Her thesis was entitled "The Marine Algae Economy of the Hauraki Gulf", and involved studying the intertidal areas around 200 miles of the Hauraki gulf, including both Great Barrier Island and Little Barrier Island, in all weathers. She also enjoyed sport and tramping in the Waitakere Range and continued her interest in music.

In 1951 she took up a junior lectureship at Victoria University of Wellington. The Wellington climate and rugged coastline made collecting samples of marine algae even more challenging. She married Morrison Cassie, a marine biologist, in January 1953, two days after handing in the first draft of her PhD thesis. Modern regulations about examinations had not yet been developed, and although the examiner said the work was good enough for a DSc, it took eight months for the final draft to be assessed before enduring a three-and-a-half-hour oral examination, followed by a further two-hour wait. She must have been made of stern stuff. Another two-year wait ensued before she found a part-time job at the New Zealand Oceanographic Institute.



In 1960 Vivienne obtained a US\$2,000 grant from the American Association of University Women to work at the Woods Hole Oceanographic Institute on the Cape Cod peninsula. She then toured the USA's southern states, visiting 40 research institutions before spending three months at the Italian Institute of Hydrobiology.

Vivienne was frustrated upon return to New Zealand as she was denied permission to work on algal culture, skills acquired whilst in America. Instead, as she later put it, she "proceeded to culture multicellular human beings", having children Rachel and Peter in 1962 and 1963. This put an abrupt stop to her career. As she puts it, "The birth of a child meant doom to any ideas of continuing a career in science or almost anything else".

Whilst seven months pregnant, Vivienne completed a report on microalgae between New Zealand and Antarctica as part of Sir Vivien Fuch's Transatlantic Expedition. It was, she noted, "rather more biological and less spectacular race" than Fuch's adventurous collaboration with Sir Edmund Hillary.

In 1964, Morrison obtained a position in the Zoology Department at the University of Auckland and the family moved north. Vivienne managed to continue her research into marine plankton. Although she was initially promised a research grant, after five months her head of department declared there would be no grant because her husband was earning a good salary. Vivienne had a post as a demonstrator and continued to publish her results on fresh water phycology, although the said HOD ignored them.

Tragedy struck at the end of 1973 when Morrison died suddenly, leaving Vivienne with 11 and 12-year old children. When she asked for a permanent university position – after years as a temporary lecturer delivering lectures for others – she was abruptly refused. Fortunately, some months later she was offered a position in the DSIR, where she worked four days a week, six hours a day. In the 11 years until her retirement she published two papers a year and assembled a preserved herbarium of some 3,000 samples of New Zealand freshwater algae. By 1980 she was able to resume some overseas travel and travelled to Britain, Hungary, Australia, Norway and Sweden, presenting research at international conferences.

In 1984 she married widower Bob Cooper, another scientist. They shifted to Te Kuiti in 1988, where Vivienne was welcomed into the local Lyceum and Rotary Clubs as well as into the church community. When Bob's eyesight deteriorated, they relocated to Hamilton, giving Vivienne an opportunity to continue her algal studies as an Academic Visitor in the Department of Biological Science at the University of Waikato as well as professional opportunities with NIWA and LandCare Research.

In retirement, Vivienne continued to research and write. In 1996, using the mass of information she had collected over the years, Vivienne published "Microalgae, Microscopic Marvels", a book aimed at popularising what she called "some of the most beautiful organisms on this planet". Further chapters were published as late as 2012. Of Vivienne's 59 academic publications, 19 were published after her so-called retirement. She was still assisting students in the limnology laboratory at the University of Waikato in her late 80s, drove until was 91 and lived independently until age 93

Vivienne has a number of algal taxa named after her.

In 1997 she was awarded an MNZM.



*Dr Vivienne Cassie-Cooper with Karen Taylor, one of the inaugural recipients of the Award in 2018. Huiarau Stewart, the other recipient, could not attend the awards ceremony.*

