

## Shirley Jeffrey (Heron)

1930 -2014

Shirley Jeffrey passed away peacefully at 2 am on 04 January following a battle with cancer. She left behind a life full of achievements and legacies for future scientists and students. Shirley, born in Townsville in 1930, was a leader of her generation.

Shirley graduated from the University of Sydney in 1952 with a B.Sc, followed by an M.Sc in 1954 under the supervision of Dr George Humphrey. Upon the completion of her M.Sc, Shirley travelled overseas where she completed a Ph.D. at King's College Hospital Medical School in London. When she returned to Australia in 1961, Shirley was offered a job by Dr George Humphrey, who was at that time the Chief of the CSIRO Division of Fisheries and Oceanography, having moved from the University of Sydney. Dr Humphrey was responsible for starting Shirley on a lifetime career in phytoplankton pigment research.

Shirley won a Kaiser Foundation funded sabbatical at the University of California, Berkeley, from 1962 – 1964 where she led the discovery of two new chlorophyll c pigments. In 1965 Shirley was invited to join the maiden voyage of the *Alpha Helix* – the new research vessel of the Scripps Institution of Oceanography, to study the pigment composition of the micro-algae of the Great Barrier Reef. The voyage lasted 10 weeks and her interactions with the other research scientists broadened Shirley's knowledge of marine micro-algae beyond just pigment composition. The publications resulting from Shirley's work aboard the *Alpha Helix* brought her an invitation from Professor Andrew Benson at Scripps to take a sabbatical in his laboratory. While at Scripps, Shirley met her future husband, Dr Andrew Heron, an Australian scientist also on sabbatical studying zooplankton population biology. Shirley and Andy Heron were together until Andy's death in 1989.

Dr Humphrey's group, while remaining a part of CSIRO, was housed at the University of Sydney during the 1970's and it was there that Shirley started the Algal Culture Collection (now the Australian National Algal Culture Collection). The collection then comprised about 30 strains. The collection moved back to CSIRO in 1978 and continues within CMAR today, housing over 1000 strains. The collection moved back to CSIRO in 1978.

In 1981 the Division of Fisheries and Oceanography was split into two Divisions and Shirley was asked to take on the role of acting Chief of the Division of Fisheries. This was a busy time for Shirley as it covered the relocation of the two divisions from Cronulla, NSW to Hobart, Tasmania. In 1984 Shirley returned to the laboratory accomplishing many major achievements in pigment research, before retiring in 1995.

Shirley's long standing passion for pigment research never retired, however, and she continued to research and publish as an Honorary Research Fellow with CSIRO until her death. Shirley published extensively until quite recently and in 2012, several of her colleagues recognised her achievements in the article *Tribute to Shirley Jeffrey: 50 years of research on chlorophyll c* published in *Phycologia* (Volume 51, 2: 123–125). Throughout her career, Shirley received many awards, in recognition of her work; the 1988 Inaugural Jubilee Award from the Australian Marine Science Association. In 1991 she became Fellow of the Australian Academy of Science (FAA) and in 1992 she was appointed a member of the Order of Australia (OA). In 1993 Shirley received the Gilbert Morgan Smith Medal from the United States National Academy of Science, the first person outside the United States to receive this Medal. She was later elected as a foreign associate of the US National Academy of Science. In 2003, she was awarded the Australian Centenary Medal, and in 2007 she received the Shinkishi Hatai Medal at the 21st Pacific Science Congress in Okinawa, Japan.

Shirley's contribution to micro-algal pigment research has been extensive and there have been numerous scientists and students who have benefitted from her knowledge. Much of the research

Shirley initiated in CSIRO is continued today by staff Shirley employed – Sue Blackburn, Ian Jameson and Malcolm Brown.

Shirley was a Fellow and a Council member at Jane Franklin Hall (UTAS) and an office bearer of the Royal Society of Tasmania, often hosting events for the Society in the CMAR auditorium. Outside of science Shirley was an avid tennis fan, playing social tennis until her early 70's and was an accomplished violinist in the Hobart Chamber Orchestra.

Shirley is survived by two sisters, Ann and Elizabeth, and a brother, Tom.