Mr Mitchell Durno (Durno) Murray

The degree of Doctor of Science *(honoris causa)* was conferred posthumously upon Mitchell Durno (Durno) Murray at the Faculty of Science graduation ceremony held at 11.30am on 12 June 2009.

Robin Murray, the daughter of Mitchell Durno (Durno) Murray, accepted the honorary degree conferred posthumously by Academic Board Chair Professor Bruce Sutton, *photo, copyright Memento Photography*.

Citation

Professor Sutton, today we honour the life and work of Mitchell Durno Murray.

Mitchell Durno Murray was born in London and graduated from the Royal Veterinary College, London, in 1946, but his research was on Australian fauna, either at the McMaster Laboratory of the CSIRO Division of Animal Health and Production, or from home after he retired in 1986.

His connection with the University of Sydney goes back to his early days at the McMaster, at that time located in the grounds of the University, where he gave lectures and supervised research students in the Faculty of Veterinary Science.

His research projects often started with a specific practical problem, but he always looked for the bigger picture.

His work on midges, for example, started with a potential Bluetongue virus outbreak near Brisbane that grew into a series of studies on midge transmission of virus diseases in Australia. On occasion he expanded the area over which he could trap midges by enlisting the help of graziers and State government departments, having them sample the midges over much of eastern Australia, adjusting the focus year by year as the project evolved.

With this data he could establish dispersion patterns for each midge species and their dependence on wind patterns during the hours of flight for that species.

For this project he also designed tests to determine the host animal for a midge's last blood meal, and so determine host preferences for each species. He could also assay midges for viruses to determine which viruses it carried.

In this way it became possible to predict the pattern of spread during a virus outbreak. One outbreak was tracked from North Queensland to Victoria over 6 weeks, showing how quickly an introduced disease might spread.

His other studies on lice, mites, ticks and flies, all affecting domestic animals were similarly extensive and rewarding.

Another area or research was ornithology, initiated while at the CSIRO through collaboration on bird banding, but expanded in retirement when he became the driving force in initiating the Australian satellite telemetry program to study albatross flight patterns.

Harnesses to attach the equipment to the bird had to be designed, and tracking arrangements had to be set up. The birds then had to be trapped and the equipment attached. The location data was relayed by satellite. This was a team effort, but it was Murray who wrote the grant applications and did the analysis.

Once again Murray incorporated the current weather data for the analysis – this time to understand how the birds used the winds for flight. They were superb navigators and in good conditions could fly in a near straight line. One covered 3,000 km in 3.8 days in a near straight line through several weather patterns.

Another bird tacked into the wind for 24 hours to cover 600km to avoid being pushed onto the New Zealand coast. As Murray wrote, they “flew with intent”.

Murray sat on many Government and CSIRO committees related to parasitology, and later Antarctic research, where he became involved with Antarctic research policy and funding. However what he enjoyed most was teasing out the message in a complex set of data and helping others to do this.

Murray remained active in research until his untimely death in April of this year. He had been highly productive, providing leadership and making important contributions over 57 years, and had published more than 130 papers.

Professor Sutton, I invite you to confer the degree of Doctor of Science (honoris causa) upon the late Mitchell Durno Murray.