

## **Ian Clunies Ross CMG DVSc FAA**

Ian Clunies Ross was born on the 22 February 1899 in Bathurst, New South Wales. The fourth and youngest son of two teachers, he was educated by them until the age of nine, but later at Newington College, Sydney, and then Sydney University, where he entered agricultural science but changed to veterinary science after one year. Clunies Ross seems to have come to science not mainly out of intellectual curiosity, or even out of fascination with the possibilities of applied research, but because he wanted to work with animals. For much of the veterinary course, he was the sole student in his year.

He graduated BVSc (Hons) in 1921 and was appointed to a temporary lectureship in veterinary anatomy. When he was appointed a Walter and Eliza Hall Veterinary Research Fellow in 1922, he followed the advice of his mentor, Professor JD Stewart, and spent much of the year working on parasites at the Molteno Institute for Parasitology in Cambridge and the School of Tropical Medicine in London, returning via the USA where he looked at methods of field control of cattle ticks in Texas and Louisiana. On his return to Sydney he resumed part-time teaching at the veterinary school and began research in parasites of domestic animals: the hydatid parasite *Echinococcus granulosus*, the liver fluke *Fasciola hepatica*, and the dog-tick *Ixodes holocyclus*. His doctorate was awarded in 1928 for research on *E granulosus* and hydatid disease in animals and man. At the end of 1926, Clunies Ross was appointed the Council for Scientific and Industrial Research (CSIR) parasitologist to continue his work at the Sydney University Veterinary School.

In 1929, Clunies Ross rented a house in Japan where he and his wife lived for almost a year while he studied research methods in parasitology at the Institute of Infectious Diseases in Tokyo. His letters to Dr Rivett, the Chief Executive of CSIR, suggest that he found value in the work. In one letter to Rivett he described a Shinto ceremony at the laboratory commemorating the animals sacrificed over the year in the cause of science, adding a suggestion that a similar practice might be instituted at the McMaster. His interest in Japan, and in Far Eastern affairs generally, continued after his return to Australia.

In 1931, he and his fellow research workers in parasitology, Gabriel Kauzal, Norman Graham and Hugh Gordon moved into CSIR's new McMaster Animal Health Laboratory, adjacent to the veterinary school. Clunies Ross was appointed Officer-in-Charge of the McMaster, and over the next decade he published some 50 scientific papers and, in 1936, with Hugh Gordon, a book *The Internal Parasites and Parasitic Diseases of Sheep*. He was also one of the founders in 1925 of the *Australian Veterinary Journal*, which he edited from 1928 to 1937.

He resigned in 1937 to become the Australian Member of the International Wool Secretariat in London but the outbreak of war in September 1939 curtailed much of the Secretariat's work. He returned to Sydney University in 1940 to take up appointment as professor of Veterinary Science. University affairs did not occupy him exclusively. In 1941 he was elected Commonwealth chairman of the Australian Institute of International Affairs, and he became a frequent public speaker, generally on topics with an international concern. In 1943, he was appointed Director of Scientific Personnel in the Commonwealth Directorate of Manpower and also Adviser on the Pastoral Industry to the Department of War Organization of Industry.

In 1945, Clunies Ross returned to CSIR to assist planning for new sheep and wool-textile research. In the following year, he was appointed a full-time member of the CSIR Executive Committee. A very successful team of three men had led CSIR since its foundation in 1926. When George Julius retired in 1945, David Rivett succeeded him as Chairman, while Arnold Richardson, the then Executive Officer, succeeded Rivett as Chief Executive Officer. As Rivett and Richardson were also approaching retiring age, the gap left by Richardson's promotion was filled by appointing two Executive Officers, one interested in secondary, and one in primary, industry. These posts were filled by FWG White, previously chief of the Division of Radiophysics, and by Clunies Ross. When 1949, the Federal government reconstituted the organisation under the name Commonwealth Scientific and Industrial Research Organization (CSIRO), Clunies Ross and White were appointed Chairman and Chief Executive Officer respectively.

At the end of the war, a large stockpile of wool and the threat of synthetics clouded prospects for the wool industry. Clunies Ross conceived a plan to use funds accumulated during the war as payment by the UK government for Australian wool, supplemented with funds raised by a government grant matching a levy on future sales of wool, to pay for promotion of wool and for research towards improving all aspects of production through studies in genetics, physiology and nutrition. His visionary plan was accepted and, with passage of enabling legislation in 1945, three new CSIRO textile laboratories were opened and a new Sheep Biology Laboratory was built at Prospect near Sydney. After his death in 1959, the Prospect laboratory was named the Ian Clunies Ross Animal Research Laboratory.

An introduced scourge in Australia was the European rabbit. CSIR and later CSIRO have been involved in attempts to control the rabbit since 1934 when Dr (later Dame Jean) Macnamara of Melbourne began agitating that myxomatosis virus should be tested as a means of controlling rabbits in Australia. After many years of fruitless attempts to spread the virus, CSIRO conducted trials in 1950 in the valley of the Murray River. In this year of widespread flooding, mosquitoes carried the virus along the river systems in Victoria, New South Wales, Queensland and South Australia, reducing the rabbit population by four-fifths in two years. Within weeks of the spread of myxomatosis, human encephalitis occurred among humans in the Murray valley. Public concern that myxomatosis virus was causing deaths of humans was allayed with the announcement that Sir Macfarlane Burnet, Professor Frank Fenner and Clunies Ross had inoculated themselves with myxomatosis virus some months earlier without ill effect. This gesture, conceived by Clunies Ross before the encephalitis outbreak and with the knowledge that a distinct flavivirus caused encephalitis, was an effective answer to popular fears about myxomatosis. There was great progress in other areas of CSIRO's work, such as radio astronomy, the role of trace elements in plants and animals, and improvements in textile processing, but there were to be in his lifetime no spectacular achievements comparable to that of the attack on the rabbit.

Clunies Ross was in great demand as a speaker and broadcaster on scientific and national issues. When the centenaries of the Universities of Sydney and Melbourne were celebrated in 1952 and 1954, respectively, Clunies Ross was invited to give the centenary oration for each. On both occasions, he discussed the under-funding of the State universities and pointed out the need for a Commonwealth commission to examine and define the functions, responsibilities and the needs of the universities. Five years later, the Federal government appointed a five-man committee chaired by Sir Keith Murray to carry out such an enquiry. Clunies Ross was the only member of the committee

who had been a member of staff of an Australian university. The recommendations for Commonwealth financial commitment of the Murray Committee were adopted by the government and began a new era in the relationships of universities with Commonwealth and States. In retrospect some such radical change seems inevitable, but, as his son Anthony has observed, it was to Ian Clunies Ross's credit that he saw and stated the obvious before it was generally recognised as obvious.

He received many honours towards the end of his career. He was appointed CMG, elected a foundation fellow of the Australian Academy of Science and knighted, all in 1954. He was given several honorary degrees and scientific, veterinary and agricultural distinctions, and served on the governing bodies of three universities and as deputy-chancellor of one. Angina, which troubled him in the late 1940s, recurred in 1957 and caused further suffering with complications until his death in 1959.

Dr CB Schedvin has written that "the National Science Centre in Parkville, Melbourne, was designated Clunies Ross House in 1968: the building featured a majestic mural by Robert Ingpen (commissioned by the Australian Veterinary Association) which depicted the three main phases of Clunies Ross's life – as scientist, administrator and public figure. All these tributes were indications that he, more than any other Australian scientist, symbolised the hopes and aspirations of a generation."

#### Further reading

Bull LB. Obituary. *Aust Vet J* 35: 349. 1959

Clunies Ross AI. Australian Academy of Science. Biographical Memoirs of Deceased Fellows. Ian Clunies Ross 1899-1959 <<http://www.asap.unimelb.edu.au/bsparcs/aasmemoirs/ross.htm>>

Collard O'Dea M. *Ian Clunies Ross*. Melbourne. 1997.

Collis B. *Fields of Discovery: Australia's CSIRO*. Sydney. 2002.

Eyre F (ed). *Ian Clunies Ross: Memoirs and Papers*. Melbourne. 1961.

Humphreys LR. *Clunies Ross - Australian visionary*. Melbourne. 1998.

Schedvin CB. *Shaping science and industry. A history of Australia's Council for Scientific and Industrial Research, 1926-1948*. Sydney. 1987.

Schedvin CB. Clunies Ross, Sir William Ian. Australian Dictionary of Biography. 1940-1980. 13:448-451.

Articles on the Clunies Ross and his veterinary contributions by Gill DA, Gordon HMCL, Turner HN and Lipson M, and on the mural in the National Science Centre, were published in the *Aust Vet J* 1968 44:467-480. [The mural, which survived being twice showered with glass by trucks that failed to take the corner, was removed on the sale of the building in 1995 to the CSIRO Australian Animal Health Laboratory, Geelong.]

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