The Australian
Women's Register

Entry type: Person
Entry ID: AWE0039

Freeman, Mavis Louisa

(1907 - 1992)

Born	19070130, Ballarat Victoria Australia
Died	19921231
Occupation	Scientist, Servicewoman

Summary

Mavis Freeman worked with Macfarlane Burnet during the 1930s and, with Burnet, succeeded in identifying the microbe responsible for Q fever. She became only the second female scientist to join the AIF and served in the Australian Army Medical Corps during World War II, undertaking research into safe methods for blood transfusion in malarial regions.

Details

Mavis Louisa Freeman went from Firbank Grammar School to the University of Melbourne, where she took her BSc in 1928 and MSc on denaturation of proteins in 1950. Between the two she had led an exciting life. From 1928 until July 1940, she undertook protein research with Macfarlane Burnet at the Walter and Eliza Hall Institute. In 1934 she won the travelling fellowship made available by the Victorian Women Graduates' Association, which allowed her to study at the Lister Institute.

In 1937, the first time the cause of a human disease had been identified and isolated in Australia, she and Burnet succeeded in identifying the bacterium, *Coxiella burnetii*, responsible for Q fever which is carried by cattle, sheep, goats, rodents, cats, dogs, birds, and marsupials. It can survive harsh conditions and remain in the environment for long periods of time. People may become infected through breathing in small particles with bacteria from animal fluids. Handling birthing products and slaughtering animals pose an especially high risk. In 1940 Mavis Freeman was the lead author of a paper on testing of sera for agglutination with au emulsion of *Rickettsia burneti*.[1]

In 1940, Mavis Freeman became only the second female scientist to join the AIF, serving in the Australian Army Medical Corps and undertaking research into safe methods for blood transfusion in malarial regions. The *Australian Women's Weekly* noted that 'as there is no special uniform for women doing her work, she will wear the trim navy-blue outdoor uniform and the saxe-blue working dress of the VAD'.[2] On duty in the Middle East, she disproved the common assumption that 'desert sores' were caused by bacterial infection, showing that they could be prevented by improvements in hygiene.

The official history tells us:

She was commissioned as a lieutenant in the A.A.M.W.S. on 20th May 1942 and appointed an assistant pathologist. Promotion among assistant pathologists, male and female, was governed by the ratio of one captain to four lieutenants.[3]

After the war, she returned to the Walter and Eliza Hall Institute until 1948 when she took a position in the Institute of Medical and Veterinary Research in Adelaide.

[1] M. Freeman, E.H. Derrick, H.E. Brown, D.J.W. Smith & D.W. Johnson. 'Studies in the Epidemiology of Q Fever. 5. Surveys of Human and Animal Sera for *Rìckettsia burneti* Agglutinins'.

Australian Journal of Experimental Biology and Medical Science. v. 18 no. 3(1940): 193-200.

[2] 'Women also Serve'. *Australian Women's Weekly*. 30 March 1940: 39. *See also* 'Let's Talk of Interesting People'. *Australian Women's Weekly*. 21 September 1940: 2.

[3] Allan S. Walker. *Australia in the War of 1939-1945. Series 5 – Medical. Volume IV – Medical Services of the Royal Australian Navy and Royal Australian Air Force with a section on women in the Army Medical Services*. Canberra: Australian War Memorial, 1961. p 419.

Published resources

Article
A War Against Disease, Sherratt, Tim, 1994,
http://www.asap.unimelb.edu.au/bsparcs/exhib/journal/as_keogh.htm

Resource Section
FREEMAN, MAVIS LOUISA, Department of Veterans' Affairs, 2002,
http://nominal-rolls.dva.gov.au/veteran?id=416835&c=WW2

Resource
Where are the Women in Australian science?, Australian Science and Technology Heritage Centre, 2003,
http://www.austehc.unimelb.edu.au/wisa/wisa.html

Trove, National Library of Australia, 2009

Book
40 Years 40 Women: Biographies of University of Melbourne Women, Published to Commemorate the 40th Anniversary of the International Year of Women, Flesch, Juliet, 2015,
http://www.womenaustralia.info/exhib/4040/

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