



ENCYCLOPEDIA OF

AUSTRALIAN SCIENCE AND INNOVATION



A gateway to the history and archives of science, technology and innovation in Australia

Edition: 2025 August

(Larneuk - Gariwerd calendar - Pre-spring: late July to August - season of nesting birds)

Publisher: Swinburne University of Technology

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Ken McInnes 80th Birthday Engineering Heritage special edition

Resources for the History of Australian Science and Innovation

Browse Archival Resource Indexes A-Z [2025 August edition: total 3,053 entries.]

Browse Bibliographic Indexes A-Z [2025 August edition: total 28,436 entries.]

Latest Annual Bibliography [no. 45 2023/24], published in *Historical Records of Australian Science*, 2025 - download the pdf for free

Featured Publication: *Institution of Engineers Australia - Foundation Societies' Publications Index* (2018) now available online, combines information from the Institution of Engineers Australia library's old "Author Card Index" and "Subject Card Index". Progressively these articles and biographies of the authors are being added into the Encyclopedia.

Scientists, Engineers, Organisations, Innovations and featured entries

Browse Entity Indexes A-Z [2025 August edition: total 10,114 entries.]

Knight, Allan Walton (1910 - 1998): was Chief Commissioner of the Hydro Electric Commission of Tasmania from 1946 until he retired in 1977, overseeing the development of hydro power generation in the State. Earlier in his career, he achieved global recognition, when as an engineer and later Chief engineer of the Public Works Department, from 1937 to 1946, he pioneered composite concrete slab and welded steel beam construction, and designed and built the concrete curved floating bridge that crossed the Derwent River at Hobart.

Wisdom, John Cromwell (1919 - 2001) was a research scientist with the Aeronautical Research Laboratories most of his working life, rising to become Head, Engineering Development Establishment, Department of Defence, from 1975 until his retirement in 1981. His early research focus was on the development of gas turbine engines, and before and after he retired, he researched and wrote extensively on the history of defence science in Australia.

Wood, Herbert Boyne (1909 - 2007): was a radio engineer who took a leading role in research and development of aircraft radio communication and navigation in Australia before the Second World War, and later was a Chief Engineer and Technical Director, STC Ltd and Managing Director, ITT Far East & Pacific.

Allied Societies' Trust Building (1924 - 1969): also known as *Kelvin Hall*, was built by this Trust formed by the Royal Victorian Institute of Architects; the Institution of Engineers Australia (Melbourne Division); the Australian Chemical Institute; the Victorian Institute of Engineers; the Victorian Institute of Surveyors; the Victorian Advisory Committee of the Institution of Civil Engineers; and the Victorian Institute of Refrigeration. It became the home of these organisations, and a place for learned society lectures, hosting many major conferences, exhibitions, meetings, plays and concerts. The facility was superseded by the National Science Centre. The building is still extant at 55 Exhibition Street, Melbourne.

First Commonwealth Conference on Public Health Engineering (1927): held at Kelvin Hall, Melbourne in September 1927, brought together for the first time, engineers and health professionals from across Australia and from all levels of governance, to discuss the best methods of waste collection, treatment and disposal to help improve public health. Chaired by Gordon Gutteridge (1892 - 1942), the conference, its published proceedings, and the work by Gutteridge and Harry Furphy (1897 - 1991), both Directors in turn of the Division of Public Health Engineering, helped improve water supply systems and initiate town sewage treatment works and sewerage schemes across Australia.

Scott and Furphy (1933 - 1991): was a major civil engineering consultancy firm, formed in 1933 by Harry Furphy and Ronald M Scott. It specialised in the design and supervision of the construction of town and city water supply and sewerage systems, but expanded to include industrial site work design, trade waste treatment plant design, and environmental studies. It collaborated and worked with other consultants on town water supply and sewerage systems including Edward Garlick (1883 - 1935), Charles Candy (1894 - 1981), and Fred Walters (1889 - 1962).

Other major consulting firms designing water and sewage treatment plants also formed at this time, including Gutteridge Haskins and Davey (1939 -) and Garlick and Stewart (1935 - 1988).

Hodgson, Henry Joseph Nichol (1901 - 1992): was a leading engineer in the design and construction of sewerage systems in South Australia from 1927 until he retired in 1966 as Assistant Director, Engineering Services, Engineering and Water Supply Department. He was associated with the construction of the Glenelg Sewage Treatment Works (1929 -) that was designed by consulting engineer Gordon Gutteridge (1892 - 1942).

Leach, John Digby (Digby) (1897 - 1966): was an engineer with the Main Roads Board, Western Australia, from its establishment in 1926, rising to the position of Commissioner from 1952. Works under his administration included the planning of the metropolitan road system; the first major works required by that plan - the Perth-Canning Bridge section of the Kwinana Freeway, and the Narrows Bridge and approaches; and the construction of low-cost developmental roads in sparsely populated areas using a technique of mechanical stabilization suitable for dry conditions.

The Stobie pole (1924 -): is a composite metal and concrete pole for electric power lines used throughout South Australia, that overcame the lack of suitable trees that were able to withstand termites. It was invented and patented by electrical engineer Cyril Stobie (1895 - 1953). With minor changes, such as using galvanised steel and designing for taller towers, the 'Stobie' pole continues to be used across South Australia today, making it a ubiquitous part of the character and heritage of the State.

Reeson, Joseph Newell (1868 - 1953): was the Engineer-in-chief and Technical Adviser to the Metropolitan Gas Company, Melbourne, 1914 to 1926, and was an inventor and patentee of many British gas works appliances, including gas manufacturing plant, coke conveyors, and gas governors. He led the introduction of electric arc welding in the construction of gas manufacturing plant, championing its use in large engineering construction works, including gasometers at the Fitzroy gasworks that, at that time, were the largest all-welded structures in the world.

Malcolm Moore Ltd (1921 -); formed by Malcolm Stewart Moore (1888 - 1969), was a leading and innovative manufacturing firm specialising in the design and manufacture in Australia of mechanical handling, transportation and construction machinery. The firm took advantage of the emerging use of electric arc welding in fabrication and employed some of the leading engineers in this field, including Wilfrid Dinsey Chapman (1891 - 1955) to make a wide range of equipment - from small tractors to large industrial cranes and conveyors, as well as hundreds of road rollers and road graders.

Dann, Howard Ernest (1914 - 1986): was Commissioner of the Snowy Mountains Authority and Director of the Snowy Mountains Engineering Corporation when he retired in 1973. He was closely associated with the development of the Snowy Mountains Hydro-Electric Scheme from the earliest initial studies for the project in the 1940s, when he was a representative of New South Wales on the Technical Committee, Commonwealth and States Snowy River Committee through to its completion in the 1970s.

Schubert, Sydney (1928 - 2015): was the Coordinator General, Queensland from 1977 until he retired in 1988, and was Chief engineer, Coordinator General's Department from 1968 to 1977. Before that he was Assistant Commissioner, Department of Main Roads, Queensland, having commenced work in the department as a cadet civil engineer in 1945. He was also a founding director of the Great Barrier Reef Marine Park Authority.

The Varsity Engineer (1910 - 1919): was the proceedings of the Melbourne University Engineering Society. It ceased publication when the Society became part of the Institution of Engineers, Australia in 1919. Most volumes have been digitised and access is provided at

volume and article level, as well as full text searching. Articles and biographies of the authors are progressively being added into the Encyclopedia.

Introduction:

The *Encyclopedia of Australian Science and Innovation* is a register of the people, industries, corporations, research institutions, scientific societies, awards, major events and other organisations that have contributed to Australia's scientific, technological, engineering and medical research heritage - the engine of innovation in this country. Each entry has references to their archival materials, museum objects and collections, and to bibliographic resources, including historical and current literature. [Read more](#)

Research, curation and web publication is supported by the Swinburne University of Technology, Office of the Chief Scientist. Web publication is by serial editions with at least four editions per year. Each edition contains new entries and articles as well as amendments and additions to existing entries.

The *Encyclopedia* acknowledges all Aboriginal and Torres Strait peoples of Australia, the traditional custodians of Country. It recognises and supports their connections to land, sea and community. We pay our respect to their elders and leaders past and present, and extend that respect to all First Nations people of the world. We are incrementally building a gateway to sources documenting Australian First Nations' knowledge: see [Theme: Australian First Nations](#).

We aim to be a 'living archive' and strive to represent all knowledge in an honest and respectful manner.

On 24 November 2022 (5.45pm), the Centre for Transformative Innovation at Swinburne University of Technology hosted an event at the Hawthorn Campus to celebrate the next phase in the life of the Encyclopedia. For more information see [Launch 2022](#)

Editor-in-chief: Adjunct Associate Professor Gavan McCarthy

Exhibitions - selected stories explored in more depth

All exhibitions from 1996 onwards

Other useful resources

Historical Records of Australian Science, Australian Academy of Science and CSIRO Publishing. The history of science, pure and applied, in Australia, New Zealand and the southwest Pacific.

Trove, National Library of Australia. Australia's free online research portal. Trove is a collaboration between the NLA and hundreds of Partner organisations around Australia, including this Encyclopedia.

History of Australian science, Australian Academy of Science. An introduction to the historical resources of the Academy.

CSIROpedia, CSIRO and Swinburne University of Technology. Innovation shaping Australia and the world since 1916.

IsisCB Explore, An open access discovery service from the History of Science Society; built on 50-years of data in the *Isis Bibliography of the History of Science*.

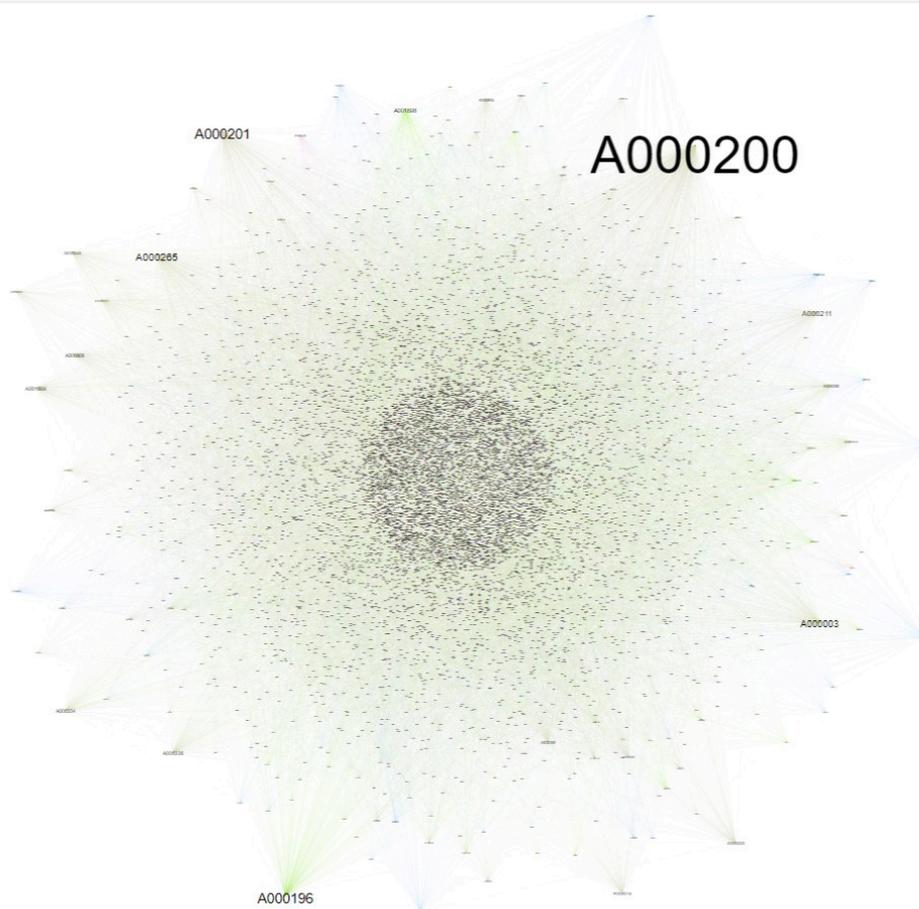
Biodiversity Heritage Library improves research methodology by collaboratively making biodiversity literature openly available to the world as part of a global biodiversity community. An advanced subject search of "Australia" is good starting point.

Guide to Australian Business Records Archive Edition 2025. This guide provides links to archival and published resources relating to Australian business entities and people involved with those entities.

Data Overview

In all, there are well over 2.3 million data elements captured in 44 data tables. The data can be made available in postgresql format and json-ld courtesy of project with the Australian Research Data Commons.

If you would like to explore the network graph of the links between entities, shown below, go to the SVG view of the data for this edition. Hint: use the sliders to locate the graph - it is large. Also, you can use "Find in the Page" to find Entity ID numbers and use the Zoom function to move in and out. For example: A000200 is the node for the Australian Academy of Science.



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What do we mean by this?

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Reference: https://beta.bom.gov.au/resources/indigenous-weather-knowledge/indigenous-seasonal-calendars/gariwerd-calendar#bom-anchor-list__item-larneuk-season-of-nesting-birds

For earlier editions see the Internet Archive at: https://web.archive.org/web/*/www.eoas.info

The Encyclopedia of Australian Science and Innovation uses the Online Heritage Resource Manager (OHRM), a relational data curation and web publication system developed by the eScholarship Research Centre and its predecessors at the University of Melbourne 1999-2020. The OHRM has been maintained by Gavan McCarthy since 2020.

Cite this page: <https://www.eoas.info/index.html>

"Being from an oral culture, Aboriginal knowledge is an embodied and integrated system that has proven to be the most enduring human knowledge system we know of." Margo Neale (2023) introduction to *Law: the way of the ancestors* (p3)