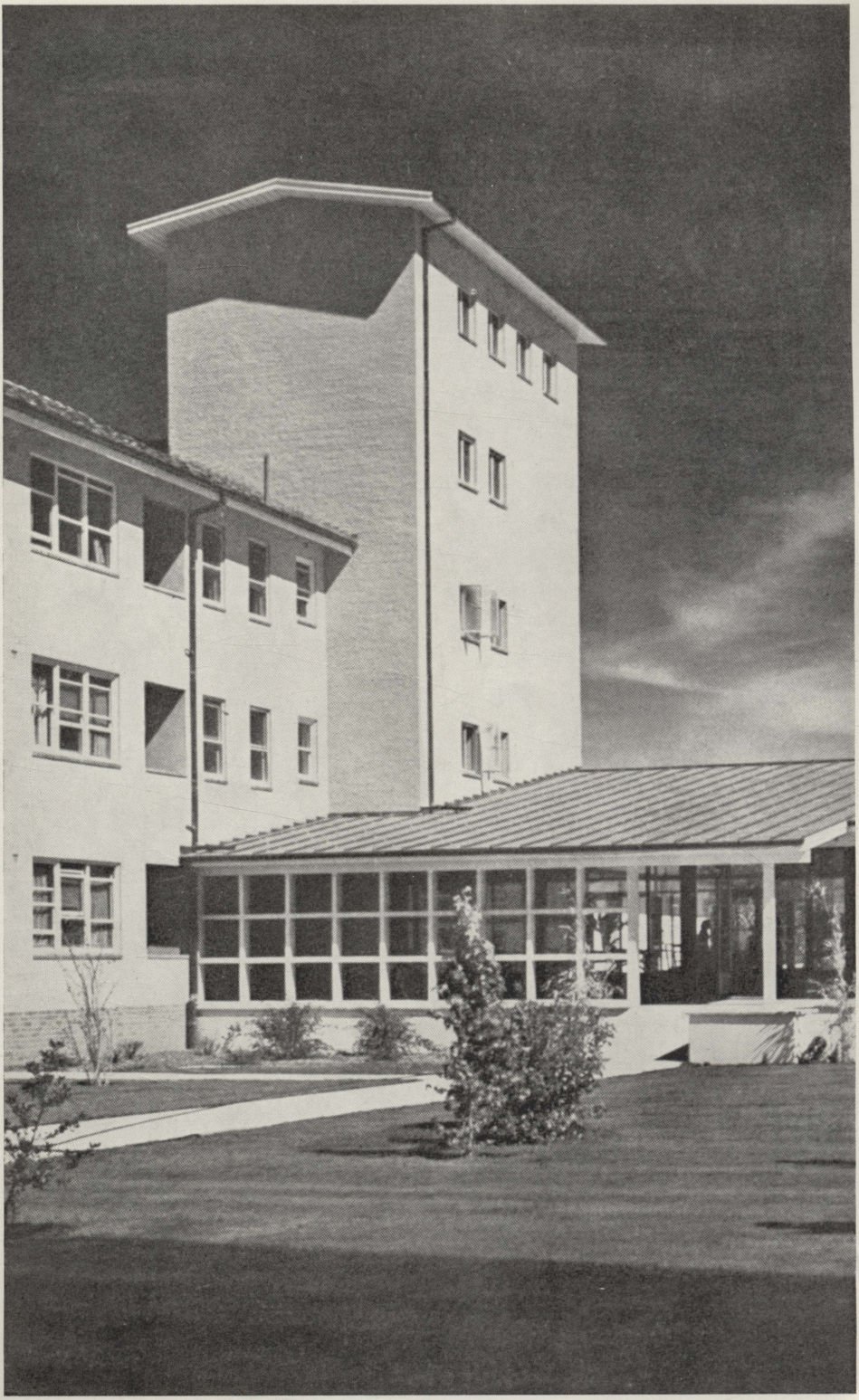
visitor's

AUSTRALIAN NATIONAL UNIVERSITY

guide

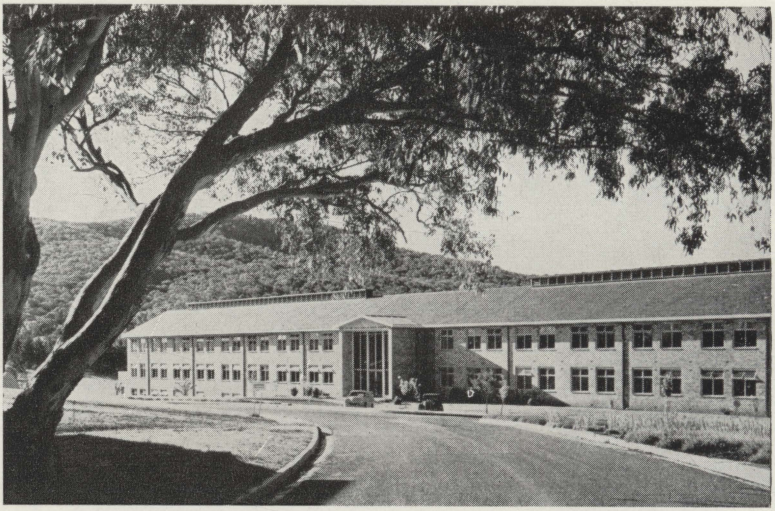


THE UNIVERSITY

The Australian National University is unlike any other university in Australia, perhaps in the world, in that it is solely devoted to research. This is carried out by the staff of the four Research Schools, who are able at the same time to supervise the studies of a limited number of research students, most of whom are preparing for the Ph.D. degree. The University was established in 1946 by the Commonwealth Government with this intention, and has been provided by it with sufficient funds to ensure that the very best staff, library services and equipment can be obtained so that Australia could have its own opportunities for advanced research in a number of fields. This makes it less necessary for Australian scholars to look overseas for post-graduate training, and is bringing to Australia a number of eminent Australian and other scholars who had previously been working abroad. The University has constantly emphasized the need also to encourage research in the state universities and, particularly since the war, this development has been most marked.

UNIVERSITY HOUSE

This building was opened by H.R.H. the Duke of Edinburgh in February 1954. It was designed by Professor Brian B. Lewis of the University of Melbourne, and was awarded the Sulman Medal for Architecture for 1954. It serves as a collegiate residence for staff, research students and distinguished visitors; also as a faculty club for non-resident members of the University. It is the scene of important academic ceremonies, meetings and seminars, lectures and concerts.



JOHN CURTIN SCHOOL OF MEDICAL RESEARCH

This new building was opened by Sir Howard Florey on the 27th March, 1958, but the School had been in occupation since the beginning of that year and prior to that had been actively at work in temporary laboratories.

It might be said that this School was the foundation stone of the University, and it was from the opportunity seen by Sir Howard Florey for medical research in Australia that the idea of the University grew. There are six departments and an Inorganic Chemistry Unit.

BIOCHEMISTRY seeks to ascertain the nature and functions of the compounds which characterize living matter.

PATHOLOGY deals with changes in function and structure in man or animal as the result of disease.

MEDICAL CHEMISTRY is concerned with the chemistry of compounds involved in the life, growth reproduction and death of cells and tissues.

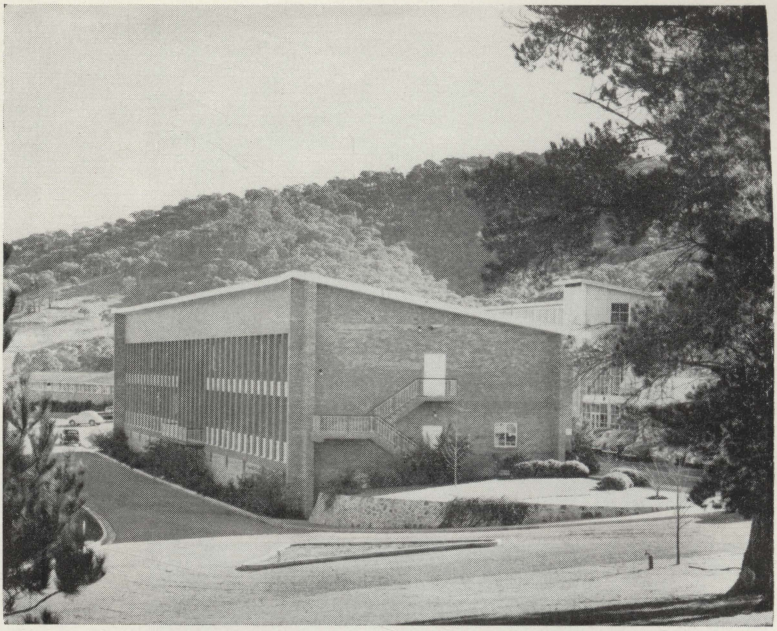
MICROBIOLOGY works on the micro-organisms which cause disease in man and animals. Myxomatosis has provided an unrivalled opportunity to study the effect of a highly virulent 'new' virus.

The Department of PHYSIOLOGY has concentrated on investigations of the central nervous system.

The Department of PHYSICAL BIOCHEMISTRY is concerned with the study of problems in the physico-chemical aspects of Biochemistry.

The medical section of the University Library

The courtyard of the John Curtin School of Research



RESEARCH SCHOOL OF PHYSICAL SCIENCES

This School is housed in two main buildings: there are, in addition, two smaller buildings containing the Department of Geophysics. On the south of the road is a brick building containing the offices and laboratories of the senior staff, a seminar room and library. On the north of the road is a larger building in which are housed the workshops and the machines used by the Departments of Nuclear and Particle Physics. There are five departments in the school:

GEOPHYSICS This Department is concerned with problems of the structure and properties of the earth's crust. A seismological observatory, concerned particularly with local shocks, is operated by the Department. The Department possesses a mass spectrometer and is engaged on age determinations using lead and other methods.

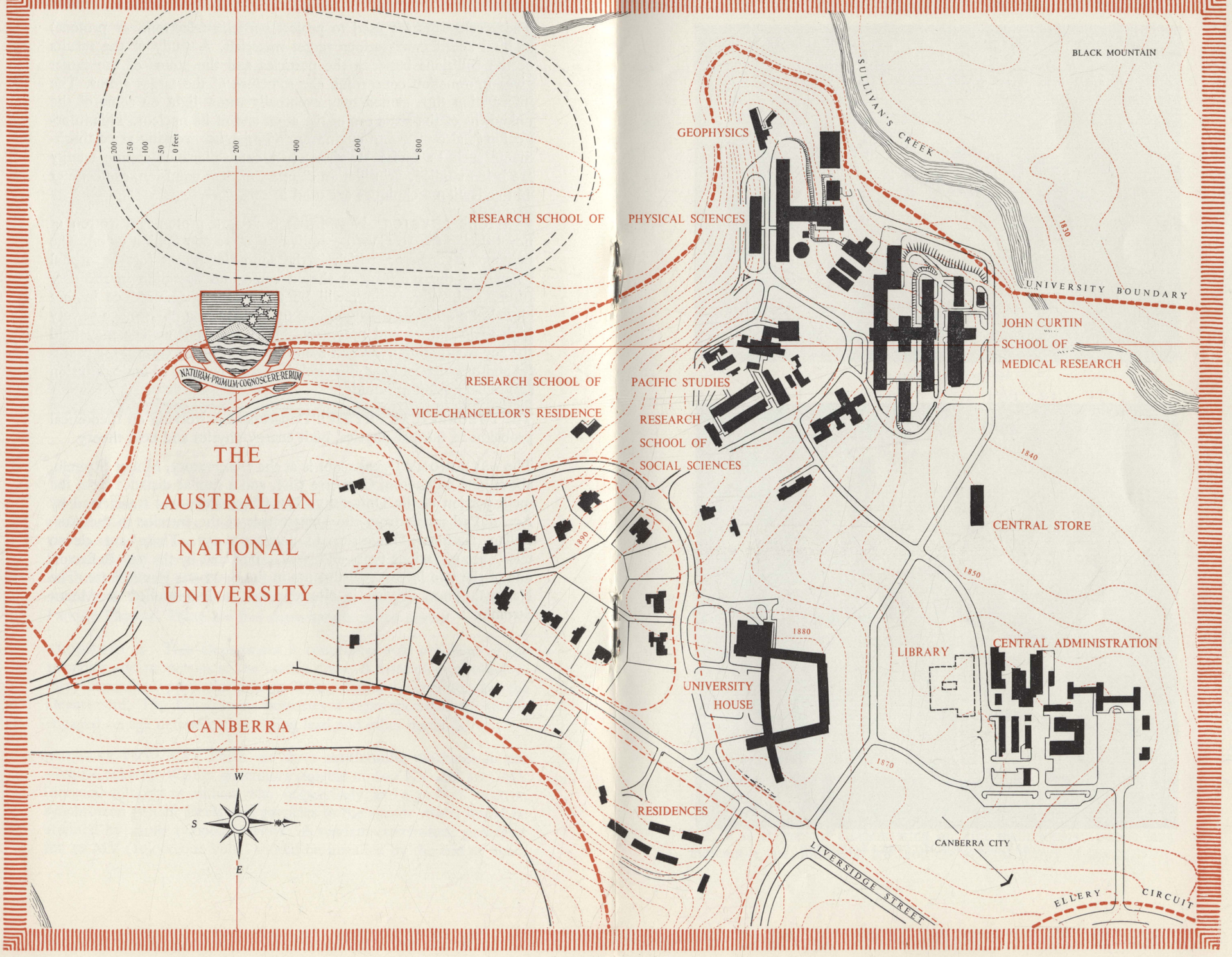
NUCLEAR PHYSICS There are three accelerating machines in use —two Cockcroft-Walton generators capable of 600 KV and 1·25 MV (600,000 volts) (1·25 million volts) respectively, and a 33 MeV electron synchrotron (which accelerates particles to the speeds which would be attained by using 33,000,000 volts). A tandem electrostatic generator for 10 MV (10,000,000 volts) should be installed by the end of 1960.

The accelerators are used to project particles (electrons, or protons) at high speed onto various target materials. A study of the results of the collisions between the particles and the atoms of the target gives information concerning the structure of the target atoms. The information thus gained may eventually throw light on some of the unknowns of the structure of the atom and of its nucleus. This information is also of use to engineers and scientists working at establishments such as Lucas Heights when applications of atomic energy are being studied. Scintillation counter, nuclear emulsion, gas counter and activation techniques are used in this work.

PARTICLE PHYSICS Now being built is a proton-synchrotron of novel design for 10 GV (the equivalent of 10,000 million volts). The homopolar generator, which is the source of power for the orbital magnet of the synchrotron should come into operation in the near future and, after testing, will be used initially to produce intense electrical discharges through gases to study plasma phenomena at very high temperatures and pressures. The plasma phenomena may hold the key to bringing hydrogen bomb processes under control for peaceful and commercial uses. Research is carried out also in ionic-diffusion and self-diffusion in liquids.

The THEORETICAL PHYSICS Department is working on theoretical problems of nuclear physics, high energy physics and field theory.

The ASTRONOMY Department is at the Observatory, Mount Stromlo, about nine miles from Canberra City, and a similar distance from the main portion of the University. The Observatory was transferred by Act of Parliament from the Department of the Interior to the Australian National University in January 1957. There are eleven telescopes of various types and sizes, dominated by the 74″ Reflector, one of the two largest instruments in the Southern Hemisphere. The National Time Service is also operated and controlled at Mount Stromlo.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BLACK MOUNTAIN
SULLIVAN'S CREEK
GEOPHYSICS
RESEARCH SCHOOL OF PHYSICAL SCIENCES
1830
UNIVERSITY BOUNDARY
JOHN CURTIN SCHOOL OF MEDICAL RESEARCH
NATURAM PRIMUM COGNOSCERE RERUM
RESEARCH SCHOOL OF PACIFIC STUDIES
VICE-CHANCELLOR'S RESIDENCE
RESEARCH SCHOOL OF SOCIAL SCIENCES
1840
CENTRAL STORE
THE AUSTRALIAN NATIONAL UNIVERSITY
1890
1850
1880
LIBRARY
CENTRAL ADMINISTRATION
UNIVERSITY HOUSE
CANBERRA
1870
RESIDENCES
CANBERRA CITY
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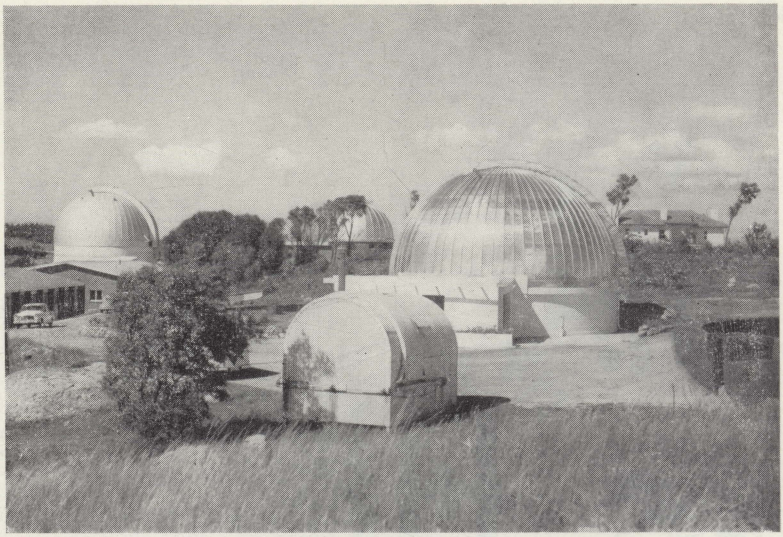
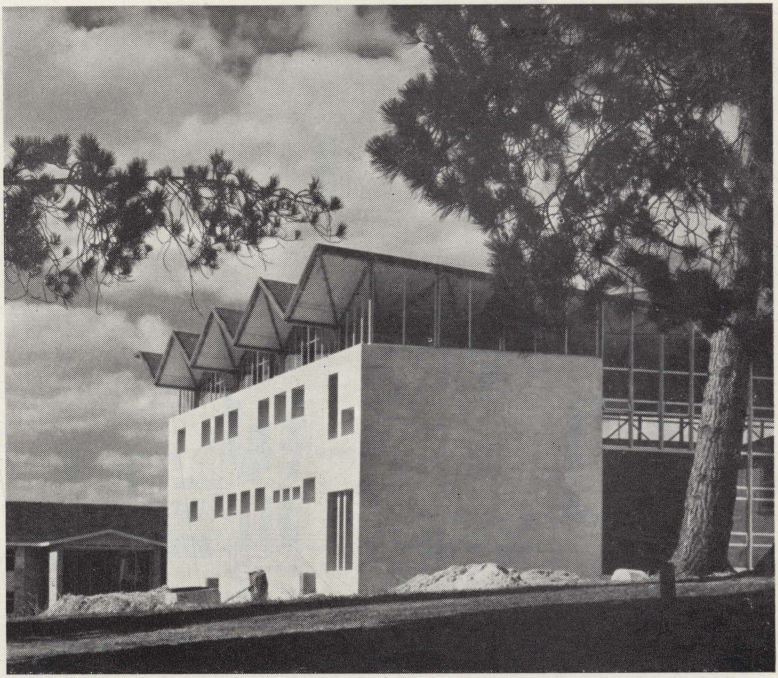
S
E
LIVERSIDGE STREET
ELLERY CIRCUIT



Mt Stromlo Observatory



The Geophysics Rock Mechanics Laboratory

RESEARCH SCHOOL OF SOCIAL SCIENCES

This School has seven Departments which are housed in the original Canberra Hospital buildings.

DEMOGRAPHY The research interests of this Department are concerned with historical and social studies of population movements in Australia, New Zealand and the Pacific Islands, as well as with the more formal statistical aspects.

ECONOMICS The work of the Department has three main branches —economic statistics, economic history and economic theory. The central interest is in processes and problems of economic growth and fluctuation.

HISTORY Though some members of the Department are pursuing research not directly related to Australian themes, the work of the Department has so far been, in the main, concentrated on Australian problems, with particular emphasis on the growth of a distinctive Australian society during the last hundred years. In 1959 the first decisive step was taken to broaden the base of the Department by making regular provision for the study of the history of the British Commonwealth, with special reference to Africa and India.

LAW The Department exists to carry out research into the operation of legal systems, generally, and in relation to particular branches of law. It is at present concentrating on four main topics: public law, mercantile law, industrial law, and the general theory of law.

POLITICAL SCIENCE The Department includes within its scope Public Administration. Its work in Political Science has been focused mainly on the relations between social groups and the State, the groups principally studied being political parties, trade unions, churches, and producer groups.

SOCIAL PHILOSOPHY The Department is at present chiefly interested in carrying on work in modern philosophy generally and in modern political and social theory.

STATISTICS The Department is engaged in developing the theory of probability and the mathematical theory of statistics in order (a) to devise methods of analysing statistical data in the biological, physical and economic sciences and (b) to study those parts of physics and biology in which random elements enter in an essential way.

RESEARCH SCHOOL OF PACIFIC STUDIES

This School is also housed in the Old Hospital buildings and contains five departments. A new Department of Economics is to be added shortly.

ANTHROPOLOGY AND SOCIOLOGY Since 1950 the Department has undertaken an extensive programme of field research in New Guinea, Australia, Indonesia and the islands of the Pacific.

FAR EASTERN HISTORY The Department is engaged in research into the history of China and Japan, both ancient and modern.

GEOGRAPHY The interests of the Department are about equally divided regionally between the Australian continent, from the tropical North to Tasmania, and the Pacific Islands, especially New Guinea, but ranging east as far as Samoa, while some work has been done in Indonesia. Within these areas, most of the research has lain in the fields of social and economic geography, so far mainly on the agricultural side, though the Department is also much concerned with problems of political and historical geography, the latter chiefly with regard to Australia itself, and with certain types of physical geography.

PACIFIC HISTORY The Department is concerned with the study of problems relating to sustained contact between Western and indigenous cultures in the Pacific Islands and in South Asia, principally India and Malaysia. The general focus of this study is that of the colonial society; its origins, its functions, and its development towards self-rule and national independence.

INTERNATIONAL RELATIONS The Department undertakes studies of the international politics of the Asian and Pacific regions and also work on the basic problems of international relations.

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