

21 SEP 1972

Wide Interest in Centennial

More than 2000 Likely to Attend

The Town Hall auditorium is expected to be filled for the principal ceremonial functions of the University Centennial in May next year.

The Vice-Chancellor (Professor N. C. Phillips), reporting to Council on the progress of centennial arrangements, said that of 8600 questionnaires posted to graduates, 1917 had been returned at the end of July and a total of 2023 persons expected to attend the celebrations. Cancellations and late registrations were expected to cancel each other out. With the official guests the total would therefore fill the Town Hall auditorium.

Professor Phillips said invitations had gone to official guests from overseas and invitations would go to official guests within New Zealand shortly. Replies from overseas indicated that there would be a large number of direct representatives from sister universities, including 10 Australian Vice-Chancellors and one Pro-Vice-Chancellor, several British Vice-Chancellors and the Vice-Chancellor of the University of Ibadan, Nigeria, the President of the University of the Philippines and the former Vice-Chancellor of the University of Delhi.

Among guests from learned societies and associated institutions would be the Presidents of the Institution of Civil Engineers, London, and the Carnegie Corporation of New York. The Royal Society would also be sending a representative. The Chairman of the United Kingdom University Grants Committee, Sir Kenneth Berrill and the Chairman of the Australian Universities Commission, Professor P. H. Karmel would also attend. Representatives had been appointed by 19 universities and a further nine universities had appointed Canterbury staff members to act as representatives.

It was likely that a high proportion of those attending the celebrations would attend the Centennial banquet and only official guests and their spouses would receive free invitations to this function, the Vice-Chancellor said. The fee for all others attending had been fixed at \$10.

If fewer than 700 planned to attend the banquet would be held in the Town Hall. If the number was between 700 and 1300 the banquet would be in the Cowles Stadium. If numbers were between 1300 and 1800 the banquet would be divided, with 500 persons being seated in the Town Hall and a larger number in Cowles Stadium. Speeches would be relayed from the Town Hall to the stadium by landline and closed

circuit television would be used with the picture being enlarged to a big screen in the stadium.

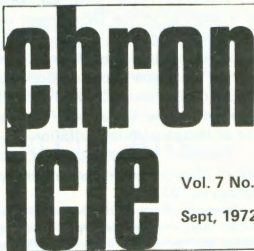
Professor Phillips said notable speakers had been arranged for all the sessions of the Centennial symposium on "The Future of the University."

Arrangements for the Centennial concert and for the production of a Shakespearean play were going ahead and there had been an encouraging response by faculties, departments and clubs to invitations to mark the centennial by reunions, academic functions exhibitions or sporting events. Registration fees, which had been fixed at \$10 (single) and \$16 (double) would help to finance these activities.

The first Centennial Information Brochure and registration forms had been sent to those who had responded to the questionnaire.

Referring to the centennial history, *A History of the University of Canterbury, 1873-1973*, written by Messrs W. J. Gardner, E. T. Beardsley and Professor T. E. Carter, the Vice-Chancellor, who edited the book and contributed an Epilogue to it, said page proofs had now been returned to the printer and he expected printing to begin shortly. It was hoped to produce a pictorial brochure for sale and distribution during the

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celebrations. Designs for glassware and labels for a centennial brew had been approved.

Mr D. W. Bain, who is a member of the Centennial Executive Committee arranging the celebrations, said that in general the response to the initial invitation had been good, but it was felt that the response within New Zealand, and in Christchurch, was a little dilatory. If the committee was to have its plans finalised in the near future it would need early replies from all those planning to attend.

VIRGINIA TO INSTALL TELESCOPE AT MT. JOHN

A third American university wishes to take advantage of the facilities of the Mount John University Observatory at Tekapo to extend its astronomical work.

The University of Virginia, at Charlottesville, will join Canterbury and the Universities of Pennsylvania and Florida at Mount John as a result of Council's approval in principle to a proposal that Virginia erect a dome on the mountain.

Virginia proposes to bring into use a 45 centimetre (18 inch) refractor telescope which belonged to Pennsylvania and which has been in store at Tekapo. It would use the telescope on parallax research for 10 years and would bear the cost of a building to house the telescope.

Canterbury would supply power to the installation as part of the observatory and administrative and technical facilities. An observer-technician employed by Virginia would be subject to the technician

in charge at Mount John. When the telescope was not required by Virginia it could be used for other work.

The dome and associated buildings would become the property of the University of Canterbury in due course.

The telescope, which weighs some eight tons, will require a dome 35ft in diameter. The instrument was originally installed in the Flower Observatory, Pennsylvania, and was completely renovated by the Wilmot Fleming Engineering Company of Philadelphia before being shipped to New Zealand in 1954 for the official opening of the Mount John Observatory. It was used primarily to measure visual binary stars and the light changes of variable stars.

HOUSE PURCHASED

The Government has purchased a property at 24 Creyke Road, on the north side of the road, for use as temporary staff accommodation. It will be used initially as temporary accommodation for Psychology Department staff at Ilam.

Professor Lu takes Sir James Fletcher Chair

Professor Frank P-S. Lu, who was a lecturer in the Department of Civil Engineering from 1957 to 1970, will be returning to the University as Head of the Department of Business Administration next year. He has been appointed to the Sir James Fletcher Chair of Industrial Administration.

Professor Lu was appointed to a Chair of Management at the University of Otago in 1971.

Born in Tanghai, China, in 1926, Professor Lu, who is married with three children, graduated B.Sc. in civil engineering from St John's University, Shanghai, in 1945. He worked with UNRRA on highway and general engineering developments in China and for the Shanghai municipal government before coming to New Zealand in 1949 to take a position with the Ministry of Works. For six years he worked on the design of hydro-electric power projects and for three years on construction.

Appointed to the academic staff of the Department of Civil Engineering in 1957 Professor Lu rapidly won a reputation, both within and outside the University, as a lecturer. He specialised in engineering economics and in building and construction engineering and attracted leading men in commerce and industry to the numerous seminars at which he taught. Applications for one of his seminars were so numerous that an additional four had to be arranged.

In 1961-62 Professor Lu was on leave with a large firm of contractors in the United States studying building management. From his research came *The Critical Path Method of Construction Management*, published by the Caxton Press in 1964. A revised and enlarged edition was published the same year and a second edition in 1968. Papers on the critical path method were published by numerous engineering and construction journals in many parts of the world and the methods he proposed have been widely adopted.

Professor Lu became a registered engineer in New Zealand in 1951 and a member of the New Zealand Institution of Engineers in the following year. He was appointed a Fellow of the Institution in 1970, having been a member of the Council since 1968 and a member of the Building Industry, Publications, Education and Examination Committees. He won the Institution's W. A. Stevenson Award in 1961 and the T. C. V. Rabone Award in 1970.

A member of the Operational Re-

search Society of New Zealand since 1968, Professor Lu is also a foundation member of the New Zealand Chapter of the Australian Institute of Building and a member of the Working Committee on Building Research of the National Research Advisory Council.

Since going to Otago Professor Lu has widened his research interests in quantitative methods of managerial decision-making and economic analysis of development projects. This year he has been acting-Dean of the Faculty of Commerce and acting-chairman of the Department of Business Studies.

Mr M. J. Dobson, tutor/demonstrator in psychology at the University of New England, Australia, has been appointed a lecturer in the Department of Extension Studies. A graduate of the University of Otago, Mr Dobson took up his present position in May 1969 and has since completed his M.A. Honours degree.

On the completion of his Ph.D. later this year, Mr Joseph W. Manz will take up a post-doctoral fellowship in the Department of Electrical Engineering. Mr Manz (B. S. 1969) has held a graduate assistantship at the University of Connecticut while preparing his dissertation, which is on applications of system theory to neural signal processing.

Dr J. C. Scrivener (Civil Engineering) will attend a United Nations seminar in Wellington in October and present a paper to it.

Noted Economist to Visit Next Year

Professor Gerald Debreu, a central figure in modern economic theory, will be a visiting professor in the Economics Department for four weeks in mid-1973.

Professor Debreu, who has been Professor of Economics, University of California (Berkeley) since 1961, is President of the Econometrics Society and has played a central role in the introduction into economic theory of the standards of rigour of the formalist school of mathematics. He is specially qualified in the general theory of economic equilibrium and is considered by many to be the leading figure in his field.

His book *Theory of Value - An Axiomatic Analysis of Economic Equilibrium* (1959) is widely regarded as one of

the most important and influential books on economic theory since the Second World War. Other publications include contributions to *Econometrica* and *Proceedings of the National Academy of Sciences of the U.S.A.*

A graduate of the University of Paris, Professor Debreu was a research associate for the Centre Nationale de la Recherche Scientifique France from 1946 to 1948, a Rockefeller Fellow in economic research in the United States from 1948 to 1950 and a staff member and associate professor of the Cowles Foundation for Economic Research, Chicago and Yale from 1950 to 1960. This year he has been a visiting professor at Cambridge.

Professor Debreu visited the University in 1969.

ABOUT STAFF

Dr Donald Pollack, Assistant Professor, San Diego State College, has been appointed a senior lecturer in the Department of Education. Dr Pollack studied psychology at the Massachusetts Institute of Technology (B.S. 1957) and at U.C.L.A. (M.A. 1962, Ph.D. 1965). He has been a member of the Community Mental Health Clinic, the Behavior Science Corporation and the P.T.A. Child Guidance Clinic in Los Angeles, and the Outpatient Children's Service of the San Diego County Department of Mental Health. Since 1968 Dr Pollack has taught child, clinical and educational psychology in the Department of Psychology, San Diego State College.

Council accepted with regret the resignation of Dr A. Crozier, lecturer in the Botany Department, from the end of the year.

Mrs R. Jessop has been appointed a Council representative on the Methven High School Board of Governors.

Mr M. L. Gimpel has been appointed acting head of the Department of Business Administration.

Dr A. Scobie, Senior Lecturer in the Department of Classics, Victoria University of Wellington, has been invited to visit the Department of Classics from 13 to 15 September. Dr Scobie is an authority on Aepuleius and the Roman novel, and will be lecturing and having discussions on this subject.

Building at Ilam

Progress Described as "Amazing"

Building progress at Ilam was "quite amazing", said Mr D. W. Bain at a meeting of Council when he commended to members an inspection of the site to see the building operations going on there.

Summarising them, the Vice-Chancellor said formal advice had been received that the tender of C. S. Luney Ltd had been accepted for the Psychology staff block at Ilam and tenders would close in August for the Geography staff block. Approval had already been given for the construction of the Geography and Psychology laboratory blocks.

Work on extensions to the Students' Union and on the student flats had started and construction work on the Library-Arts block had now reached the eleventh floor, the top floor apart from a service floor. The block, to be known as the James Hight Library, after Sir James Hight, the second Rector of Canterbury College, was due for completion by the end of May next year.

Also under construction were: The north and south Arts lecture theatres.

The English-Education building.
The School of Music.
The Registry.
Bishop Julius Hostel.

Professor Phillips said it was hoped to gain early approval for the construction of the two outstanding buildings for History and Modern Languages.

Mr Bain said it seemed that work had started on the western end of the Students' Union, but not at the east. He also asked whether there were any plans for the conversion of the "menagerie" attached to the Mathematics-Psychology block and what plans were in hand for the School of Fine Arts.

Professor Phillips said there would be extensions to the east of the Students' Union for the Student Health Service and backstage accommodation for the Ngāio Marsh Theatre. It was hoped the eastern end of the building would be much tidier when these extensions were completed.

Referring to the Psychology animal house the Vice-Chancellor said it was not planned to move it, but judicious planting nearby would work wonders. Internal alterations would be required in the ground floor of the Mathematics-Psychology block.

On the School of Fine Arts the Vice-Chancellor said: "This matter is very

much on our agenda. It will follow the Faculty of Arts among academic buildings on the building programme and when the time is appropriate I hope Council will act with vigour to enable the School to be accommodated more adequately than it has been since it moved to Ilam in 1957."

He added that he hoped the Okeover homestead, with excrescences removed, could be retained. "It is a comely building and could provide good accommodation for, say, the Department of Extension Studies on the Ilam site."

"Four-Year Course in Fine Arts Essential"

After visiting 22 art establishments on study leave Mr E.C. Francis, a senior lecturer in Fine Arts, says that allowing for different rates of development of individuals and the amount of ground which must be covered he is convinced that nothing less than a four-year course in fine art is essential at degree or degree equivalent level.

In a report to Council on his leave Mr Francis said the widest possible range of processes, even though workshops might be small and initially ill-equipped, should be available for use throughout a fine art course. An initial introduction to these processes, perhaps permitting a number of options, provided a wider horizon of possibilities to a student embarking on a lengthy period of creative exploration.

The open network system of individuals choosing their own courses of study with tutorial advice was seen to be operating satisfactorily in most of the departments visited, whether large or small. Naturally there would always be a high proportion of individuals in each year who would choose to specialize in one subject area sooner or later.

A history of art and complementary studies area should be staffed not only by specialists in art history conducting courses to degree level in the subject but also by others who, sympathetic to the require-

Professor Kay Returns

Professor L. Kay returned to Canterbury on 15 August to resume his duties as Head of the Electrical Engineering Department and Dean of the School of Engineering following 18 months' special leave evaluating his Sensory Aid for the Blind in the United States.

The results of the evaluation indicate a very high level of acceptance by the blind.

ments of art students generally, might provide programmes in topics ranging from philosophy and sociology to science and technology, relating these areas to the cultural milieu of our times.

Even in Britain, where art students had access to so much original work by the finest artists of the day, most establishments made provision for an artist in residence, usually for one year, in addition to regular visits by eminent practitioners. Because of New Zealand's isolation there was a critical need for a visiting lectureship to be established at the School of Fine Arts, Mr Francis said.

"A Research Tool"

The IBM 360/44 computer at Ilam was overwhelmingly a research tool, the Vice-Chancellor told Council when commenting on a summary of Computer Centre usage by Departments during the previous month.

The average daily usage was 14 hours 18 minutes 34 seconds - not saturation point, but sufficiently high for users to welcome the relief that would be afforded by the new Burroughs computer about the end of the year.

Of the time spent on current projects for the year to date, 42 per cent was used for Master's and Doctor's degrees, 39 per cent for research, 14 per cent for education, including undergraduate courses, and 5 per cent for "other".

Forty-three per cent of users assessing the value of the computer to their project said it would be impossible to attempt it otherwise, 21 per cent said the project would be limited in scope otherwise and 36 per cent used the computer to reduce time and labour appreciably. The estimated income from user Departments for the year was \$22,889.

(Continued next page)

Construction in First World War

Although the cloisters and quadrangles of the University's city site have long been admired and photographed they were not part of the original buildings of Canterbury College. Indeed it was not until the middle of the First World War that the north and south quadrangles and the Library were completed.

"The aim of every good English college is to have a noble court or quadrangle," said the *Press* in 1913 when commending a proposal by Mr S. Hurst Seager, a member of the Board of Governors and a well-known city architect, for completing "the fine example of college architecture following the best traditions" designed by the College's first architect, B. W. Mountfort. Mountfort had laid out a quadrangle initially, but it was later disfigured by a physics laboratory, a huge structure of corrugated iron in which the first professor of physics and chemistry, A. W. Bickerton, worked. The laboratory was known widely as "the tin shed" and stood on the site now occupied by the Library.

In his report Seager said it was much to be regretted that the later College buildings did not conform to the excellent example set by the original buildings — the block at the clock tower and the Hall. The inharmonious design of the later buildings and their position made it difficult to prepare a scheme which should at once meet the requirements of the College and add architectural dignity to the group. He had given careful consideration to both these aspects of the question. The professional staff had been consulted and the scheme provided for the rooms they needed and all the buildings likely to be required.

These were: A Library to hold 20,000 books, partly in the Library itself and partly in a storage room; a large lecture room seating some 200 students; two small lecture rooms; two professors' and two lecturers' rooms; a physical laboratory and extensions to the biological laboratory as well as a rearrangement of offices and common rooms for men and women students — no Students' Union then existed.

"Pleasing Effect"

From a personal study of the colleges of Oxford, Cambridge and elsewhere, Mr Seager came to the conclusion that double quadrangles gave the most pleasing effect, and his proposals were that the north quadrangle should be 120ft by 106ft, and the south quadrangle 196ft by 92ft. The new buildings would be erected between and round the new quadrangles.

The plan of reconstruction would not affect the outward appearance of the College. The present office, however, would give way to a professor's room, and a larger office would be provided on the left side of the entrance hall.

The tin shed would be removed, and a library would be built a bit further back on the line of roadway from Rolleston Avenue past the caretaker's house. The caretaker's house would be removed, and the unsightly gap between the College Hall and the School of Art would be stopped with a graceful building containing lecture rooms and lecture halls. The site of the present female students' quarters would be thrown into the south quadrangle, which would extend from the new library to the chemical laboratory. Open arcades would run along the sides of the quadrangle from building to building in the north court, something after the style of those in the old Provincial Council Chambers.

One of the principal additions projected was the building on Rolleston Avenue. It would have an entrance on that street, and would be easily approached, under cover, from the main portion of the College. The hall on the street level would be used both for large classes of College students and for popular lectures of a semi-public character. Above it would be the smaller lecture rooms, a professor's room and the lady students' common room, kitchen, cloak-room and lavatories.

Physics Laboratory

The space left for buildings adjacent to the present College buildings was the space at the eastern end of the south quadrangle, where it was proposed to place the physics laboratory. This building as planned would not require any extension, nor was it likely that the chemical laboratory would require enlarging. The biological laboratory, on the other hand, was too small and additions would have to be made in the immediate future. Space was left for this so that the building could be continued to the east along Hereford Street. Until the new physics laboratory was erected, however, it was proposed to remove the "tin shed" bodily, and place it east of the new site, where it would continue as a temporary physics laboratory.

Seager's report said the method of heating rooms by open fires was woefully inefficient and the present College buildings and the additions would be warmed by "hot-water heating." In fact the system was not installed until the mid-twenties.

The total cost of the work, including the Library and the Physics laboratory, now occupied by the English Department, was estimated at 20,746.

Appeal for Library

In the same year a public appeal was opened by the Chairman of the Board (Mr J. C. Adams), the Chairman of the Professorial Board (Professor Charles Chilton) and Professor Arnold Wall, Professor of English at the College from 1898 to 1931, for funds to build a library. They said in their appeal:

"What we have is not even the germ or nucleus of a library, for it cannot develop. We have about 4000 books, many of which are out of date and useless, stored partly in a small, cold, dark room, with no accommodation for readers and no space for tables or chairs, and partly in the hall of the College, which is not adapted to the purpose. We have an annual grant of 100 to buy books and periodicals, a sum which is lamentably inadequate.

"We have a 'librarian', usually a student, who attends only four hours a day during term, and not at all in vacation, and is paid 30 a year. We have also to face a yearly loss of books, due to the absence of proper control and to the inevitable lack of interest in an institution so poverty-stricken and so ailing. Things being as they are, we do try to encourage students to read by lending them our own books, which not only suffer by much handling, but also often go astray, it may be for years, and it may be for ever. Students who wish to read quietly are obliged to go to the reading-room of the Public Library, a quarter of a mile away, or go home; there is no place for them in the College. The sad truth is that the College is not so much a place where the student can study, as a place where he can attend lectures and laboratories, and no more.

"We want a stone building conforming to the general style of the College and to the design for the completion of the quadrangle, to which we look forward. We want a spacious room, properly lighted and heated capable of housing at least 20,000 books, and furnished with seating accommodation and tables for at least 100 readers. A few smaller rooms would, of course, be required. We want a highly qualified librarian, who should attend all day, at a salary of at least 250 or 300 a year; and he would require an assistant or two, who could probably be found among the students.

"We estimate that the sum of 5000 might be enough to relieve our most pressing necessities, and we aim at that. Needless to say, we could do with a far greater sum. If we had such a library, we might hope for a greatly increased annual grant for the purchase of books. If we had such a library we should certainly receive donations of books and collections of books

Leave Report

Bitter Debate over Tenure in Canada

The non-granting of tenure to members of the academic staff who were viewed favourably by the students was the source of a continuing and bitter debate between students and administrators of certain departments at the University of British Columbia, said Dr R.W. Hopkins (Accountancy) in general observations on study leave from June, 1971, the major portion of which was spent at U.B.C.

Reporting to Council, he said there was very little evidence that younger members of staff or senior students at Canadian universities were interested in taking up positions in New Zealand universities. Generally they appeared to prefer to wait and see what would occur in the employment situation first in Canada and then in the United States.

It was clear that most Canadian academic accountants found that participation in examining for professional accounting bodies was academically unrewarding. A reorientation of effort away from such examining and more towards research was very evident. The need for a similar reorientation should be given careful consideration in any assessment of the future development of the Department of Accountancy at the University of Canterbury, he said.

After the relative isolation of the New Zealand research scene, it was stimulating to have personal discussions with overseas colleagues in the field of corporate finance. Discussions of particular value were those

with Dr Robin Marris and members of the Economic Research Unit at Cambridge, Professor J.R. Meyer of the National Bureau of Economic Research, New York, Professor Myron Gordon of Toronto University and Professor Will Carleton of the Amos Tuck School, Hanover. Results of earlier research were presented in a "Working Paper" to a Graduate-Staff Seminar at the University of British Columbia. The paper was entitled "An Analysis of Corporate Financial Performance: Some Methodological Implications and Developments".

"The overwhelming impression gained from research oriented activities and discussions was the need to establish in the Australasian area a data bank along the lines of the Compustat tape in the United States. This data bank would contain details of corporate financial performance and associated share market information for all companies listed on the various Stock Exchanges in the area. The role of the Universities is seen as convincing the business community of the need for such a data resource and encouraging its establishment by the business community," Dr Hopkins said.

The study leave provided the opportunity to check on the quality of the courses in finance developed in the Department of Accountancy at Canterbury. In addition to informal discussions this was achieved mainly by participating in the Ph.D. programme in finance at U.B.C.

"The general conclusion is that the formal lecturing programme in finance up to the masterate level at Canterbury is more than adequate in coverage and (in the absence of post-masterate work) progresses in varying degrees into areas dealt with in

Ph.D. programmes overseas. The ability to maintain this level of teaching in finance will be closely related to the development of continuing research programmes in finance and related areas," he said.

One of the most significant developments encountered in the teaching of accounting and management was the work being done in measuring the value of information in accounting systems in managerial decision situations. Considerable benefit could be derived from the maintenance of regular contacts with the research group working in this area at U.B.C.

In contrast, some of the teaching of accounting and management in the United Kingdom possessed an "old world" atmosphere. Overall, one gained the impression from discussions and examination of text-book selections and course outlines that a considerable range of quality of courses existed in the universities visited. Courses in accounting and management at the University of Canterbury compared more than favourably with the courses examined in the United Kingdom and Canada.

Dr Hopkins spent considerable time both in the United Kingdom and the United States in the examination of undergraduate and graduate library facilities for commerce students. Three features considered worthy of comment were:

The frequent and somewhat surprising presence of multiple copies (8 to 12 in number) of basic texts in undergraduate libraries; the extensive photocopying facilities available for students; and the use of video tape to provide remedial instruction (in booths in libraries) on certain technical material covered in lectures.

Research Grants

The National Roads Board has approved a grant of \$1600 for research being undertaken by Dr P. J. Moss in the Department of Civil Engineering on epoxy resin materials. The amount includes \$1000 for materials and equipment and \$600 for student labour.

The Board has also approved a grant of \$500 to provide equipment for research being undertaken by Mr A. Ballinger, its scholarship holder in the department.

The New Zealand Forest Owners' Association has made a grant of \$1000 to meet the cost of academic staff of the School of Forestry travelling in New Zealand to inspect forest projects.

Additional support for research being undertaken in the Botany Department by Dr J. S. Waid into the disposal of used oil has come from two oil companies. Mobil Oil (N.Z.) Ltd and the Atlantic Union Oil Co. (N.Z.) Ltd have each contributed \$100 to the project.

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Quadrangles and Library

which are now scattered about in various places. The library of the Philosophical Institute, for instance, would find a home there. Some of the professors of the College would be willing to place in it some of their own books which are likely to be of use and interest to students, and those professors whose own libraries are left by will to the College would be comforted by the assurance that their books will be safely and worthily housed.

"Hitherto we have not appealed to the public, because we have had some hope of getting our library built by the governing body of the College. But that body, though fully aware of our necessities, and sympathising warmly with us, has been obliged to answer our frequent and urgent appeals with a non possumus. There are no funds available for this purpose, and we have no hope now that there will be any in the near

Professor Rayner Pleased to be Back

Professor A. C. Rayner (Economics) was pleased to return to Christchurch after six months in Britain. Given greater awareness of ecological concepts England seemed much more over-populated, noisy and violent than he remembered it and he was pleased to experience sunshine again, he said in his study leave report.

Professor Rayner spent much of his leave at the London School of Economics. He attended graduate seminars in econometrics and mathematical economics at which papers were often given by notable economists from other universities round the world. The audience was composed of academic staff from the School and the other parts of London University, plus the mathematically-inclined doctoral students. The combination of the excellent papers and the stimulating discussion was very interesting. This kind of exchange could not take place in New Zealand, nor in any but a few universities in the world.

"Although distinguished speakers can and do travel, few universities can provide a large audience capable of providing a worthwhile interchange of ideas. This is of course a fact of university life, since it is precisely the national and international migration of students and staff to a few centres that allows a concentration of specialists to occur.

"Those staff at the School that I had contact with were uniformly friendly and helpful. It was no coincidence that they were almost all working in these same two areas of economics that I am interested in; the size of the L.S.E. meant that I never even saw the majority of the economists there. I would not myself choose to work in such a large institution; the endless corridors and the studies with their 'office hours' notices are not conducive to good staff-student relationships. Indeed there were a number of demonstrations, sit-ins and even sleep-ins while I was there. These seemed to be all handled with great aplomb, using a low key reaction, and as a result caused negligible disruption. Thus, when the Senior Common Room was 'liberated' to become the Common Room, meal and bar service was simply discontinued until the students got bored with the exercise a few days later," he said.

"While the L.S.E. was in many ways an extremely exciting place to work at, I found the costs, in terms of living in London and commuting, very considerable. The latter, which is always a wearisome business, was exacerbated by the winter weather and the unending round of strikes, both official and unofficial. After six years

of living in Christchurch it seems conceivable that people are prepared to voluntarily endure such an unpleasant, time-wasting, way of life."

Professor Rayner was impressed by the considerable variation in the quality of staff and students amongst the universities he visited. The great attraction of Oxford, Cambridge and London had long caused such a disparity of standards in the British university system. However, in the social sciences, the operation of post-graduate grants by the Social Science Research Council had altered the distribution of ability. The system of awarding grants, at least as it affected universities other than Oxford and Cambridge, ensured that grantees were clustered in a small number of universities. The others had to make do with

U.S. Physicist on Visit Next Year

Professor Lawrence C. Biedenharn, professor of physics at Duke University, North Carolina, and a distinguished theoretical physicist, has been awarded an Erskine grant to visit the Physics Department in September next year.

Professor Biedenharn took his Ph.D. at the Massachusetts Institute of Technology in 1949 and has been a physicist at the Oak Ridge National Laboratory, an associate professor at Yale and Rice Universities and a consultant to Oak Ridge, the Los Alamos Scientific Laboratory and the National Bureau of Standards. He was awarded a Fulbright fellowship to the University of Manchester, a Guggenheim fellowship to Bohr's Institute and a National Science Foundation post-doctoral fellowship (C.E.R.N. and the University of California, Berkeley). He has also been a visiting professor at the California Institute of Technology.

The author of two books — *Quantum Theory of Angular Momentum* and *Coulomb Excitation*, Professor Biedenharn has written numerous reviews and scores of research papers.

His recent work on relativistic quantum mechanics, the Dirac equation in particular, has been described as the most significant since Dirac's original discoveries 40 years ago.

largely foreign or privately financed post-graduate students, who were, on the whole, of a much lower ability.

"The S.S.R.C. system has helped new centres of considerable excellence in economics to develop," he said. "Essex now has one of the best departments in the country and certainly the best graduate programme, with perhaps the exception of the L.S.E. On the other hand, universities which do not attract the better undergraduates and are unable to get S.S.R.C. post-graduate grantees are in a bleak position. I consider one of the better attributes of the New Zealand university system to be the fact that it does not in general encourage the migration of the more talented students to relatively few centres.

"Oxford and Cambridge are in an anomalous position in the spectrum of quality. While they remain supremely attractive for the undergraduate, in the social sciences at least they seem to think it ungentlemanly to offer post-graduate courses and therefore lose graduate students to the L.S.E., Essex and one or two other places. Further, the tutorial system seems to develop a breed of non-specialist economists. Finally the system of paying salary by age rather than academic excellence helps the migration of some of the best younger economists to other universities where they can get a higher income, and teach bright graduates their specialist knowledge, rather than having to teach introductory economics fifteen times a week in tutorials. It is of course fortunate for the other British universities that Oxford and Cambridge do have this idiosyncratic attitude to post-graduate courses and salaries. If they were to be more 'modern' in their outlook it is difficult to think what would then prevent them having a monopoly of academic ability of staff and students at both graduate and under-graduate levels," Professor Rayner said.

Storage Compound for Zoology

An outdoor storage compound and associated landscaping on the north side of the Zoology building is planned.

Council adopted a recommendation from the Executive that subject to the approval of the consulting architect the proposal put forward by Professor G. A. Knox for an outdoor storage compound and associated landscaping be approved.