

23 MAR 1970

Chronicle

Vol. 5, No. 1
March 1970

FORESTRY SCHOOL OPENED

Founded in 1921, Canterbury's School of Forestry was closed in 1934 when the Government of the day cut off its grant during the economic depression and warned the University that if the School continued to operate, the University's grant would be reduced by the cost of the School's operations. Last month the Minister of Forests, Mr Duncan MacIntyre, opened a fine new School of Forestry at Ilam and expressed the hope that it might become the envy of the world.

This term 22 students began the first of two professional years of the four-year course leading to the degree of Bachelor of Forestry Science. The School will accommodate about 70 students.

Foresters, millers and merchants made up a large proportion of the crowd of more than 400 which heard the Chancellor, Mr T.H. McCombs, the Vice-Chancellor, Professor N.C. Phillips, and Mr MacIntyre outline the history of the School and its prospects at a time when forestry is playing a significant part in national economic development. After declaring the building open—"As a simple man who loves the land and trees I deem it a great honour"—Mr MacIntyre unveiled a plaque inside the main doors to mark the occasion.

In his address, Mr MacIntyre said consideration had been given as early as 1885 to the establishment of a forestry school in the colony because of the need to perpetuate Kauri forests, which at that time dominated thinking about forestry. But 40 years later the growing afforestation on the pumice country of the North Island and the development of Hanmer, Tapanui and Naseby forests and the Selwyn Plantation Board's activities in the South attracted attention and two claimants for the School appeared—Auckland and Canterbury University Colleges. The position was resolved by forming two schools—an unfortunate decision which resulted in sufficient finance for neither and which meant that neither survived the depression that followed soon afterwards.

"In spite of their inadequacies and early deaths, there is no doubt both these schools had a significant effect on forestry development," Mr MacIntyre said. "A sample of graduates made last year illustrates this

point. Out of 21 graduates from Auckland and Canterbury, 16 continued their careers as foresters, forest scientists, and timber officers to become leaders of industry this decade. Two entered other professions in which their forestry-

A NEW FACE

The *Chronicle* appears today in a new format designed for faster and cheaper production. For an experimental period it will appear more frequently than in the past in an attempt to keep members of the university community better informed of events within the University.

Staff are invited to contribute news items of interest to the *Chronicle* and departments have been invited to appoint staff correspondents to provide departmental news for publication.

The *Chronicle* will be edited by the Information Officer (Ext. 768).

flavoured influence would have been felt, and three gave up forestry altogether."

Location Argued

About 1940 Mr A.R. Entrican started to revitalise the service by introducing training at all levels. In the absence of a New Zealand School, training of professional foresters had to be done overseas. The range of schools selected and the variety of

teaching and philosophies inculcated into down-to-earth Kiwis had given New Zealand forestry great vigour.

There could be argument about the timing of the reintroduction of a forestry school, and there certainly was argument about its location. As soon as a school was mooted, the two claimants raised their voices. There was, in fact, a fairly recent report favouring Auckland. Central North Island industry, established on the forests being planted at the time arguments were taking place about the first schools, added their voice to that of the University of Auckland and, no doubt, Auckland had strong claims. Massey was the obvious choice—for someone from Hawke's Bay. Hamilton a new University, could claim to be near exotic forests.

"The decision was not an easy one—but in the end the Hon. G. Gerard persuaded even I that Ilam had some claims," said Mr MacIntyre. "However, forestry and forest industries in this country are still young and just gathering momentum. They must be looked at in perspective and planned well ahead. They need complementary University activities, teaching and development, with the close proximity of courses teaching soil science, agriculture, range management, soil and water conservation, landscape architecture and engineering, with the Forest Research Experimental Station working on the vast problem of the rehabilitation of the South Island's barren, scenic, backbone.

"Requirements Filled"

"These requirements are fulfilled admirably by this Ilam campus. No doubt the foresters' big hobnailed boots will add a touch of reality to

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Minister's Address (from Page One)

teaching on the campus, and some of the graces and erudite learning of the Arts and other schools will rub off on the foresters.

"This building is vastly different from the one-room Auckland school in the 1920's and 30's and the little-better Canterbury school of that time. With staff recruited from various directions, and the presence of such a wide range of schools on the campus, there is every hope that forestry teaching and thought emanating from here will greatly benefit further development of forestry in this country. When research is established next door, the combination will be such that there could be few more promising centres.

"And forestry today, more than ever before, needs this training, these skills and this professionalism. The forester today is both a conservationist and a money-maker—terms which need not be mutually exclusive.

Much of our prosperity depends on the wise use of our land under headings apparently unrelated to forestry. But the well-being of our lower farmlands depends largely on the condition of the upper reaches of our rivers—and during earlier times much of our farmland was threatened when forests were ruthlessly cut or burnt to clear more land for grazing. We are only now starting to realise the importance of trees to our whole life cycle—and a large part of a forester's work is to preserve the forests earlier generations wasted thoughtlessly.

"The more direct financial benefits are easy to accept. Industry within this country and overseas needs an unending supply of timber. We have the land and the climate; and we have the men with the skills to make them work for us. But forestry, like any industry, does not stand still. It must go forward—or back. And the difference is in the skill and imagination—and the professional training—of the men who must work in it and manage it. That is what this school is for—to supply the wide and intensive teaching needed to make a top-class professional forester today. What the Forests Act of 1885 set out to do with its focus mainly on kauri, this school can now accomplish with its focus on the total field of forestry.

"I am very pleased to be here to see the start of this third—and permanent—school and I am confident that it will contribute a great deal to the

future of forestry in New Zealand. I made mention of Mr Enrican and how in 1940 he sent our young men to the four corners of the earth to be taught—in recent years the bulk of our graduates have been trained in Australia, so that today our foresters know theirs as friends. Setting up our school will cut this liaison which I know to be so valuable, because today forestry is more than growing trees—it is also trade. At the Forestry conference I discussed with my opposite number the advisability of retaining this liaison by our taking three Australians and then accepting three New Zealanders—I am keen to see that this works. It is my duty also to again record our thanks to Australia for the gift of books which she made to the School so that we would not lack for knowledge of her forests.

Appeal for Endowments

"At the N.Z.F.S. jubilee celebrations in October last year in Rotorua, I blew a skirl on my pipes at saw-millers, timber merchants, and anyone who would listen, to awaken them all to the part they have to play to endow this School with scholarships and funds, so that it may attract the best men from all the world to do research and post-graduate studies. A percentage of a cent on all throughput from pinus battens to tissue paper will ensure that this school is the envy of the world—and the other faculties. My war-cry was heard but a good tune on the pipes bears repeating often. Success is in sight—the very common sense of the appeal is helped on by the tax reductions available—but I enjoin you all to keep at it.

"Today marks another important step in our country's progress—the contribution that this School will make to New Zealand and the world will be great. As a simple man who loves land and trees I deem it a great honour that it should fall to my lot to declare the School of Forestry open, and I wish great success to all who will work and study in it." Mr MacIntyre said.

Nursery Again Open

A new nursery for the children of students and staff will be available in the Students' Union, city, this term. The nursery will be in the flat formerly occupied by the caretaker. The nursery

Four - Year Course

The course leading to the degree of Bachelor of Forestry Science, in which there is opportunity to graduate with honours, comprises two intermediate years of pure science taken in other departments of the University and two years of professional studies in the School of Forestry. There is provision for students with suitable B.Sc. degrees to be exempted from the two intermediate years.

The usual programme is: First year: Chemistry 1, General Mathematics 1, Biology IB or Botany 1. This year may be taken at any university but the subsequent years must be taken at Canterbury.

Second year: Botany 11, Soil Science 1, Economics 1 and Introductory Forestry (not a full unit).

Third year: Forest Biology, Forest Measurement, Forest Economics 1, Forest Engineering.

Fourth year: Forest Economics 11, Forestry and Society, Silviculture, Management.

There will be three practical courses during the two professional years: exotic timberland management at Kaingaroa and Kinleith Forests; indigenous timberland management in central Westland, where a field station is planned and watershed management at Lake Sumner State Forest Park and in the upper Waimakariri catchment. As an alternative to the latter, students may take a course in industrial management at a processing plant. In addition to these two to three-week practical courses there will be regular visits to local forests and processing plants.

Of the students in the first professional year this term, 14 have completed the intermediate course, six B.Sc. degrees and one a B.Agric. degree. Post-graduate studies will begin in 1972, the year after the first intake completes the bachelor course, when students may commence courses leading to the degrees of M. For.Sc. and Ph.D.

proved extremely useful last year and the new arrangements should make it even better this year.

Students should be enrolled at the City Students' Union office.

Challenge Clear and Response Bold - Vice-Chancellor

Storm and vicissitude had marked the history of forestry education in New Zealand, said the Vice-Chancellor in his address at the opening of the School of Forestry. It was as though a young sapling, having begun to put down its roots, was overturned in a blizzard, lay dormant for a third of a century and now today was transplanted in healthier soil, in a gentler climate and with more hands to foster its well-being.

Private generosity lay at the outset of the story, said Professor Phillips. In 1919 Mr T.W. Adams, of Greendale, left 100 acres and \$2000 to assist in establishing a School of Forestry at Canterbury, and two years later a programme of teaching and research began under Mr Charles Fowleraker on the old city site of the college. Governmental parsimony and provincial rivalry, that familiar New Zealand combination, resulted in a familiar type of outcome—two schools of forestry, one in Auckland and the other in Canterbury, both gallant and both starved. From 1925 the reorganised Canterbury School developed a four-year course leading to a degree in forestry science, as well as courses for a diploma and for rangers—a remarkable dispersion of scarce resources.

The Auckland School survived until 1930, when the Government closed it, leaving Canterbury's as the national school—a decision which, Auckland's Registrar telegraphed, would be accepted in a sportsmanlike manner. Such chivalry, however, availed Canterbury little, for as the economic depression deepened and College Council decided to close the school "temporarily" at the end of the ten years' 50 students had taken and 16 had graduated.

Thereafter, to fill the void in New Zealand, the Forest Service sent its forestry education in universities in Great Britain and Australia. After the Second World War, when the re-

establishment of a School was seen again as a national need, a battle for possession of the School was fought with fluctuating fortunes.

"The ultimate decision to locate the School at Ilam was due to several factors, some of which the Chancellor has mentioned; but I would emphasise the impressive constellation of associated skills and disciplines available at Canterbury and Lincoln College and the offer of the Canterbury University Council to find a place at Ilam for the South Island Forest Service Research Unit," said Professor Phillips. "Nor can I imagine that our bid would have had such a happy ending, had we not been able to count at all stages on the staunch and unwavering support of Dr Burns and his colleagues at Lincoln College—in the stage of advocacy, in the preparation of preliminary course outlines—and now and in the future in the teaching of essential parts of the first degree course and in postgraduate teaching and research.

"Self-Evident Need"

"The need today for a New Zealand School for New Zealanders is almost self-evident. At the least, it saves overseas funds spent in training forestry graduates abroad. It shortens the period of training. Without retreating into barren isolation, it can teach with the specific circumstances of New Zealand in mind. It can encourage, and be encouraged by, research undertaken by the New Zealand Forest Service and by New Zealand industry. Some triangles, we know, are eternal and deplorably so; but in forestry, as in other spheres, there is a triangle that can only be beneficent, with the Government, private enterprise and the university forming its three sides.

"The School of Forestry therefore holds a strategic place in associating the university in the great national venture of developing, managing and exploiting our forest resources, of producing and utilizing our timber, of conserving our land and of opening it prudently for sport and recreation. But on the domestic plane, it also holds a strategic place within the University. When we made our ultimately successful case in our quinquennial sub-

missions to the University Grants Committee in 1964, we summed up the project in these words: 'The proposal envisages the study of timber from its beginnings as a seed in the soil through to its use in the building, furniture, pulp and paper and associated wood product industries in New Zealand.'

"The building which the Minister is about to open is of modest dimensions; it may even be dwarfed by some of its neighbours, erected or soon to be erected, on this site. But as foresters know,

It is not growing like a tree
In bulk doth make man better be
and the significance of this School in the University as a whole is out of all proportion to its size. Forestry gives to, and takes from, many other disciplines here represented in strength. It must have a firm base in the pure sciences, biological and physical, and in mathematics as well as in economics; and this is provided in the two years of the intermediate course. Beyond that, in the two professional years and later, there is close association with economics, civil, mechanical and chemical engineering, geography, law and even fine arts. Forestry is no longer, if it ever was, solely concerned with growing trees. Though biology and silviculture must remain basic, the study of the nature of wood and the utilization of timber are no less important. Never let it be said that the School cannot see the wood for the trees.

"The students who will enter the School for the first professional year within the next fortnight or so will number 22. The first batch of graduates as Bachelors of Forestry Science may be expected in 1972, and in that year post-graduate studies, leading to the degree of Master of Forestry Science or Doctor of Philosophy, will begin. For the first few years when it is fully operative the School will enrol between 70 and 80 students, whose training will be in forestry generally or more specifically in wood science. They will, I trust, make their full contribution to the health, wealth and happiness of New Zealand.

"That we can now embark upon this exciting prospect is largely due to the university's good fortune in being able to appoint Professor McKelvey, a Canterbury graduate in science and an Edinburgh graduate in forestry, as Dean of Forestry and head of the School. Since he took up his duties, my role as Vice-Chancellor has subsided for the

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Cash Constraint Scheme Successful for School of Forestry

The School of Forestry was the first building to be completed under the University Grants Committee's "cash constraint" scheme, by which the University was offered a sum of money to plan, build, equip and furnish the building, with maximum freedom within that constraint to go ahead.

The scheme proved extremely satisfactory and the building was opened only 29 months after the brief was handed to the architects, Messrs Hall and Mackenzie. Accurate estimates before representations were made to the U.G.C., close collaboration with the architects and the calling of tenders at a time of keen competition among builders all contributed to the success of the scheme.

The School, of 22,000 square feet gross, is a simple, functional building with a distinctive character. It has identity as a School of Forestry and features the use of wood yet maintains a relationship with the surrounding buildings.

In the construction, in-situ concrete bearing walls are used to carry precast concrete floors and spandrel walls. Roof loads at intermediate points are supported on laminated timber beams and carried to the ground on laminated timber posts. Timber and timber products are used with restraint where the materials are the logical choice for the service required and no attempt was made to use all the materials available. Extensive use is made of treated Radiata pine in roof framing and in principal support members, such as laminated beams, posts and exterior frames. Inside, a wide range of New Zealand timbers is used, together with a representative range of timber products, in joinery work, panelling, fittings, wall linings and furniture.

In the installation of all timbers particular attention has been paid to the supply and handling to ensure that correct moisture content for the service condition should be maintained. Within practical limits this aim has been accomplished.

To check actual conditions in which timbers will serve the New Zealand Forest Service will install instruments to record temperature and humidity in the building over a 12-month period. These records will be evaluated against actual movement in

the various species of timbers, which will be measured at intervals. Similar test measurements will be made by the School of Engineering of movement in the main structural timbers. The results are expected to confirm that reasonable control by ordinary methods can improve the standard of finished work.

All the services are run in a direct manner without concealment for economy and ease of maintenance.

The School is in three principal sections: administration; laboratories and lecture rooms; and forest products laboratory and workshop. The administrative section consists of a fine hall inside the main entrance with seven staff studies and office space. The second section has two lecture rooms, three seminar rooms, a management laboratory, with a calculation room, an undergraduate laboratory for wood science, physiology and soil science, an advanced laboratory for wood science and physiology, an undergraduate biology laboratory, an advanced biology laboratory, a preparation area, balance room, instrument room, growth room, three staff laboratories and two study-laboratories.

In the forest products laboratory there is a timber engineering room, a pulp and paper room, a preservation and seasoning room and a workshop. Equipment for the forest products laboratory includes an Amsler 600kg wood-testing machine, a laboratory-scale digester and refiner, a laboratory-scale kiln and a small pressure preservation cylinder. A steel reaction beam has been embedded in the floor of the timber engineering room for truss testing.

VICE-CHANCELLOR'S ADDRESS

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most part into that of benevolent spectatorship, and the hard, constructive work has fallen into Professor McKelvey's able hands. He has watched with care but tact over the planning and construction of this building, he has devised curricula as a result of an overseas tour and consultations with colleagues at both Canterbury and Lincoln, he has, I believe, won the confidence of both the New Zealand Forest Service and of the timber industry, he has seen to the equipment,

The School is the first stage of a two-stage project which will include the South Island Forest Research Institute. The site development for the whole project has as its theme a transition from the formal roads and plantings of the Ilam site to the peculiar informality of the New Zealand bush. The proposal develops the theme gradually from the outer limits of the site with rocks, stones and sub-alpines, with cabbage trees and kowhais forming a foil to the solid masonry, and progresses to a denser bush and dry creek character in the inner courtyard with a stand of exotic pines flanking the forest products laboratory. It is proposed to run the dry creek theme out to the stream at the north, crossing the roadway with a cobbled ford. The proposal is intended to reinforce the particular identity and interests of the forestry complex.

Builders of the School of Forestry were R.C. Jamieson Builders Ltd. The structural engineer was Mr W. Lovell-Smith, the services engineers Messrs Maundonald and Associates and the quantity surveyors Messrs Shipstan Davies and Partners.

The staff of the new School are: Professor P.J. McKelvey, B.Sc.(N.Z.), B.Sc.(For.)(Edin). Visiting professor, F.B. Knight, B.S.(Maine), M.F., D.F. (Duke). Senior lecturers, J.D. Allen, B.Sc.(Hons.)(Edin); J.S. Reid, M.Sc.(N.Z.); A.G.D. Whyte, B.Sc.(For.)(Ph.D.)(Aberd), Dip.For.(Oxon). Lecturers, J.E. Barker, B.S.F.(Br.Col.), M.S.(Calif.); B.D. McConchie, B.Sc., B.C.A.(Well), Dip.For.(A.N.U.).

Technicians, Mrs Lynda Bamford, B.Sc., Miss J. Wederell, Miss R.B. Moore. Secretary, Mrs W van der Goot.

furnishing and library requirements of the School and he has recruited an excellent staff from New Zealand and from overseas.

"In short, Sir, the School is now ready to report for duty. The University welcomes its new School of Forestry and the national responsibilities it brings with it. The challenge is quite clear: I am confident that the response will be as bold," Professor Phillips said.

Forestry School CHANCELLOR EXPRESSES UNIVERSITY'S THANKS

Mr McCombs expressed the University's thanks to the Government for providing this handsome addition to the University; the University Grants Committee, both for deciding in 1964 that Canterbury should be the site for the national School of Forestry and for devising the "cash constraint" scheme by which the building was planned and built with none of the frustrations and delays that sometimes attend the construction of major buildings; the architects, who had given the School a special character while fitting it unobtrusively into the Ilam campus; and the contractors for translating the imaginative plans into concrete, steel, timber and glass. In the School's library there were substantial gifts from the New Zealand Institute of Foresters, the Forest Service and New Zealand Forest Products Ltd., and he expressed the University's gratitude for these.

"We remember too today those who helped develop the School in its early days and those many Canterbury people, both within and without the University, who took part in the long and now successful campaign to re-establish the School of Forestry at Canterbury after its closure in 1934," Mr McCombs said. "I have particular pleasure in welcoming Mrs C.E. Fowleraker, widow of Mr Charles Fowleraker, lecturer in charge of the old School from its opening in 1921 until its closure, and Mr F.E. Hutchison, Mr Fowleraker's assistant. It might seem invidious to name any of the persons responsible for re-establishing the School, for the campaign was a heartening example of the way the city and province rallied to its University when it seemed the School might go elsewhere; but the risk must be taken in expressing our thanks to the former Minister of Forests, Mr R.G. Gerard, whose decision it was in 1964 to re-establish the School at Ilam. Mr Gerard had the best of advice, but the final decision is always a lonely business, even when it is right.

"His good advice came from the Director-General of Forests. It was made re-establishment of a School possible and his grasp of the potentialities of this University which made it his choice for the site. However, the decision might not have been possible without the lively controversy

of the forties and fifties, which had as its starting point Mr J.H.E. Schroder, a former chairman of Council. Mr Schroder began the post-war negotiations for the re-establishment of the School and focussed public attention on the issue. Canterbury organisations and Canterbury people responded magnificently. The location of the School here is a tribute not only to their tenacity, but also the validity of their arguments.

"The University has a tremendous debt of gratitude to all involved. We are confident that it will justify in the School of Forestry the confidence you placed in it and that our debt will be rapidly and satisfactorily discharged by the quality of the teaching and research of the School," said Mr McCombs.

First Step In Science Extensions Taken

The first step in extending the Faculty of Science buildings at Ilam was taken by Council when it approved area schedules providing for an additional 202,000 square feet net. The area schedules will be forwarded to the University Grants Committee with a request for authority to proceed to sketch plans.

The Vice-Chancellor, Professor N.C. Phillips, said the extensions were necessary to accommodate the Faculty of Science when the University roll reached 10,000. The present buildings were planned for a roll of 5000 and when the proportion of science students was not as high as at present. When the roll reached 10,000 there would probably be 3000 science students compared with between 1280 and 1320 when the roll was 5000.

Though there would be more than double the number of students, the University was not asking for twice as much space. The total net area of the present buildings was 220,000 square feet and the area schedules provided for 202,000 square feet.

Post - Graduate Support

An indication of the extent to which University skills are being used by Government, local authorities and private enterprise is provided in the way 11 post-graduate students in the Zoology Department are being supported. The Vice-Chancellor told Council that three were on Internal Affairs Department Wildlife Scholarships, one had a D.S.I.R. research contract, one was supported by the Christchurch Airport Authority, N.A.C. and Air New Zealand, one was supported by the Entomology Division of the D.S.I.R., one by the New Zealand Forest Service, two had research contracts with the Marine Department and one a research contract with the Christchurch Drainage Board.

A grant of \$5000 towards the development of a fish finding sonar in the Department of Electrical Engineering has been approved by the Invention Development Authority. Professor L. Kay, also hopes that a further \$5000 grant will be made by the Marine Department.

Professor Phillips said there was some unevenness in the rate at which different departments expanded and Mathematics and Zoology were now feeling the pinch. In 1964, when plans for the Faculty of Arts were being advanced, the University asked for provision for an additional storey on the Psychology and Geography buildings in the Arts Faculty so that the space those departments were now occupying in the Science Faculty could be taken over by science departments.

The U.G.C. said at the time that an additional storey could not be considered until it could be proved there was pressure of numbers, but it agreed that the foundations for the Arts buildings involved should be adequate for taking another storey.

"The matter is urgent because we are now at the working drawing stage and a case has been put forward for an additional storey on the two Arts buildings," Professor Phillips said. "If it is approved, the Zoology and Mathematics Departments will get relief as soon as the Arts buildings are completed."

It was later announced that provision had been made for an additional storey for each building.

Made in Canterbury

Programmer-analysts at the Computer Centre of the University of Canterbury have good reason to believe that their achievements compare favourably with those of computer software writers overseas.

When the University decided that it needed an automatic graph-plotter to assist in the interpretation of research results produced by its major computer—a 360 Model 44—it was realised that the cost would be reduced and operations simplified if the plotter were driven by its older computer—a Model 1620 installed originally in 1962.

The essential information to be plotted would need to be punched into the 1620. The vital links would be two special programmes or "software"—one to enable the 360/44 to punch the cards necessary and a second to enable the 1620 to interpret them. These links did not exist.

In collaboration with research workers in the Department of Chemical Engineering, the programmer-analysts produced a suite of programmes which were ready by the time the plotter was installed. These were set to work as intended. After a few months' experience the 1620 programme was re-designed and a faster and more efficient version was put into service.

"Cantran" Compiler

Because a large proportion of the University's programmes are written in Fortran language, the computer must translate them to its own machine code before it can execute them. For this it uses a key piece of its software—a Fortran compiler. To cater for all the powerful programming and operating procedures advanced research workers need, the standard Fortran compiler contains a large number of features, and programme translation takes place in several stages. This takes considerable computer time.

However, not all programmes need the full power of the standard compiler, especially undergraduate class work, where hundreds of short programmes might need to be checked and translated very quickly.

Last year, in response to the increasing general need, the central storage of the 360/44 computer was doubled in size. This presented another opportunity to alert programmer-

analysts. Storage would be big enough to hold a special Fortran compiler, tailored to deal with small programmes and remaining in storage while a large number of them went through the whole checking, translating and execution processes. This would make operations very much faster.

Compilers of this kind have been produced for much larger computers elsewhere and overseas opinion was consulted. The reply was that the idea was all right, but that it would take the entire effort of the Computer Centre for two years to produce one.

Mr Alan Causier, a member of the centre staff, took up the challenge and in four months produced a compiler to meet the tough specifications he had written for it. Test runs show that it is eight times faster than the standard compiler. It is now being put into service.

The number of Fortran programming exercises produced in undergraduate classes is expected to increase rapidly in the next few years. Mr Causier's compiler, which has now received the name of "Cantran", gives the University a powerful and efficient means to meet this development and to make the most of its computer resources.

Awards for Civil Engineers

Two members of the staff of the Department of Civil Engineering won awards at the annual conference of the New Zealand Institution of Engineers held in Dunedin last month.

Professor R. Park received the Freyssinet Award for the best paper during the last three years on an aspect of building design or construction and Mr F. Lu received the Rabone Award for the best paper during the last five years on a general aspect of engineering.

The head of the department, Professor H.J. Hopkins, was chairman of a session at which Mr R. Shepherd, a reader in the department, and Mr R.D.

Landscaping At Ilam

Greater use of the Avon River between Ilam and Clyde Roads is to be made in landscaping at Ilam. If the Christchurch Drainage Board approves, the river will be widened near the Students' Union.

This was one of several suggestions reported to Council by the Vice-Chancellor arising from a meeting between University and Ministry of Works officers to discuss landscaping. Professor Phillips said there was some concern at the large area of concrete by the Science Lecture Theatre block and experiments would be made with the use of greenery in tubs to break up the area until the trees at present planted there grew larger. Some attention would be given to softening the shapes in the pool outside the lecture block.

Professor Phillips said 12,000 cubic yards of soil had been used in forming earth mounds near the Clyde Road frontage to screen car parks. Apart from planting, this work had been completed.

Of 591 trees and shrubs planted last year, 30 trees had been planted along University Drive, 35 trees along the Ilam Road frontage, 27 shrubs and trees near the Sciences Library, 54 shrubs and trees near the boilerhouse, 83 shrubs and trees near the Engineering School, 122 trees and shrubs near the Engineering Library, 31 trees and shrubs near Electrical Engineering, 186 trees and shrubs on the south bank of the Avon and 23 trees near the Students' Union.

Sharpe, a post-graduate student, in association with a leading Dunedin consultant, presented a paper which provoked a stimulating discussion.

A paper by Dr T. Paulay on reinforced concrete shear walls and a paper by Dr J.C. Scrivener on reinforced hollow brick walls were also well received.

Mr W. Holibar, surveyor to Lloyd's Register of Shipping, Lyttelton, has presented to the Library the annual presentation copy of Lloyd's Rules and Regulations for the Construction and Classification of Steel Ships, 1969.

On the nomination of the External Affairs Department, Dr R.G. Cant (Geography) has been chosen for the 1970 Asian and Pacific Council Fellowship. The purpose of the fellowship is to promote regional understanding by providing an opportunity for creative writers and scholars of the ASPAC member countries to acquire a direct experience of the way of life in another member country and to undertake observations and studies in their respective field of interest through personal contacts with the people of the country they visit.

Dr Cant plans to visit the Philippines.

Dr H.G. Daellenbach, an Assistant Professor in Quantitative Methods at the University of Washington, Seattle, has been appointed a senior lecturer in the Department of Economics. Dr Daellenbach, who is aged 36, studied at the Universities of Geneva and California (Berkeley), where he completed a doctorate in operations research and economic theory. He is the author of several articles and the co-author of three books concerned with the mathematical analysis of economic decisions.

Dr D. Lindley, a research officer with the Central Electricity Generating Board, Hampshire, has been appointed a senior lecturer in the Department of Mechanical Engineering.

Mr P.B. Guest, a research student in theoretical physics at the University of St. Andrews, has been appointed a lecturer in the Mathematics Department. Mr Guest graduated B.Sc. in physics from the University of Hull in 1965 and M.Sc. in physics from St. Andrews in 1967 and has been undertaking research for a Ph.D. since then. Mr Guest, who is 28, is married with no children. Mr T.O. To, a Ph.D. candidate at the University of Saskatchewan, Saskatoon, has also been appointed a lecturer in mathematics.

Dr Donald S. Horning Jr., survey entomologist in Oregon, is to be a visiting lecturer in the Zoology Department for two years. He graduated B.S. in forestry in 1963 and M.S. in entomology (1968) from the University of Idaho, and took his Ph.D. in entomology last year at the University of California, Davis.

Mr N.M. Blampied, a junior lecturer in the Psychology Department at the University of Auckland, has been appointed a lecturer in psychology. Mr Blampied graduated B.Sc. in

ABOUT STAFF

psychology from Auckland and is completing an M.Sc. thesis.

The resignation of Dr L. Symons (Geography) was received with regret by Council. Dr Symons has been appointed to a position in the Centre of Russian and East European studies at the University College, Swansea.

Dr K.E. Ussher, director of the Student Health Service, has been elected president of the Australian and New Zealand Student Health Association for the next three years.

Resignations accepted by Council include those of Mr A.J. Geldens, senior lecturer in accountancy, Dr H.R. Hipp, a lecturer in Germanic languages, Dr R.H. Mephum, a lecturer in botany, Mr Maurice Till, University pianist, and Mr M. Acock, assistant lecturer in philosophy.

Two new lecturers have been appointed in the Department of Chemical Engineering. They are Messrs J. Abrahamson, a Ph.D. student at the University, and I.A. Gilmore, a research fellow at the University.

Professor John Curtis Gowan, Professor of Education at the San Fernando Valley State College, who has been cited as a prolific educational researcher, is visiting lecturer in the Education Department during the first term. Senior author of six books on the education and guidance of gifted children, Professor Gowan has also written more than 100 articles on gifted children, teacher evaluation, measurement, guidance, and special education. He is a member of the editorial board of *Gifted Child Quarterly*, *California Journal of Educational Research* and *California Personnel and Guidance*. Professor Gowan graduated from Harvard in 1935 and took a doctorate at the University of California, Los Angeles, in 1952.

Mr W.R. Fimple, who is completing a Ph.D. at the University of Connecticut, has been appointed a lecturer in the Physics Department. Mr Fimple, aged 33, qualified in the field of aeronautical engineering with a bachelor's and master's degree at Princeton and after several years of working with United Aircraft Research

Laboratories completed a master's degree in physics at Connecticut in 1966.

Mr R.M. Kirk, who graduated M.A. with first-class honours in 1968 and who is completing research for a Ph.D., has been appointed a lecturer in the Geography Department.

Mr P.B. Davis, who last year completed an M.Sc. in sociology at the London School of Economics, has been appointed a lecturer in sociology. Mr Davis, aged 23 graduated B.A. with honours from the University of Southampton in 1968. Another lecturer in sociology will be Mr R.G.A. Gidlow, a student at the University of Kent at Canterbury.

Dr A.H. Grey, Associate Professor at Brigham Young University, Provo, Utah, has been appointed visiting lecturer in the Geography Department.

A post-doctoral fellow at Brown University, Rhode Island, Dr Lawrence J. Read, has been appointed a lecturer in the Zoology Department. Dr Read, aged 28, is married with no children. He graduated from San Francisco State College in 1965 and took a Ph.D. in zoology at the University of Washington last year.

Dr E.C. Young, senior lecturer in zoology, has been granted leave until April, 1972, to take up an appointment as project manager of a United Nations rhino beetle project at Apia, Samoa.

New members of the University of Canterbury Association and University Club elected recently were: Mr and Mrs R. Hopkirk, Mr and Mrs N.W. Kennedy, Mr J.D.A. Hercus, Mr J.G. Feajang, Mr and Mrs J.F. Burn, Mr and Mrs P.B. Carter, Mr D.J. Boyce, Mr R.J. Calvert, Mr D.J.R. Holderness, Professor and Mrs B.H. Howard, Professor and Mrs J.L. Ryan, Mr A.C. Mitchell, Mr T.J. Morrison, Professor L.F. Phillips, Mrs R.M. Randall and Mr and Mrs J.M. Scott.

A unanimous vote of thanks to Professor L. Kay for his energetic work as president in 1969 was carried by acclamation at the annual meeting of the Staff Club. The new president for 1970 is Professor F. Devonport and the Vice-President Dr M.P. Hartshorn. Mr A. Geldens was re-elected treasurer, Mr R.P. Bond secretary and Mr W.D.J. Cotton as auditor. The committee for 1970 is: Mrs D. Holland, Dr W.J. Baggage, Dr M.H. Munro and Messrs D.R. Gordon and R. Sharp.

ERSKINE VISITORS Zoologist's

Book

Professor A.O. Barut, Professor of Physics at the University of Colorado, will hold a visiting Erskine Fellowship at the University for six weeks between June and September. Professor J.M. Wise, Professor of Geography at the London School of Economics, will hold a visiting Erskine Fellowship between July 12 and September 20.

Two heads of departments, Professor A.D. Brownlie (Economics) and Professor F. Devonport (Accountancy) and Mr R.H.T. Bates, a reader in the Electrical Engineering Department, have also been awarded Erskine Fellowships. Professor Brownlie will be away from July 20 to November 14 to visit centres of learning in mathematical economics in Britain and Europe and to attend selected seminars, lectures and conferences, including the Second World Conference of the Econometrics Society.

Professor Devonport will visit North America, Britain, Japan and Australia to study recent developments in accounting theory and accounting courses at overseas universities. He will also study new areas of accounting with a view to introducing these at graduate level at Canterbury and developments in accounting teaching methods.

Mr Bates will visit Britain and Europe in connection with teaching and research relevant to electro-magnetic theory and antenna and microwave practice. He will be away from August 15 to October 20.

Professor Wise, who is head of the Geography Department at L.S.E., has specialised in historical and economic geography with special reference to regional planning and development. He will lecture on locational analysis and regional planning and development. After graduating from the University of Birmingham, Professor Wise lectured at Birmingham. He was awarded a Ph.D. in 1951 and became a lecturer at L.S.E. In 1954 he was appointed Sir Ernest Cassel Reader in economic geography and in 1958 Professor of Geography. He has been a visiting lecturer in universities in Norway, Sweden, Austria, U.S.S.R., India and Japan and in 1958 he was awarded the Gill Memorial Award of the Royal Geographical Society for his contributions to economic geography.

It is hoped that Professor Wise will be guest speaker and major contributor

to a special symposium on geography and planning which will be held during the triennial conference of the New Zealand Geographical Society in Christchurch during the August vacation time.

Professor Barut, a leading theoretical physicist, was born in Turkey, and took his Ph.D. at the Technische Hochschule, Zurich, before going to the United States. He was assistant professor at Reed College, the University of Montreal and Syracuse University and in 1961-62 he was on the staff of the Lawrence Radiation Laboratory and Physics Department, University of California, Berkeley. Since 1962 he has been Professor of Physics at Colorado.

Professor Barut, who will present a systematic series of post-graduate lectures on "Dynamical Groups in Physics" and advise and participate in current research in atomic physics and related fields at Canterbury, is a Fellow of the American Physical Society, the European Physical Society, the Swiss Physical Society and the American Association for the Advancement of Science. While he is at Canterbury he may also give some semi-popular lectures to the Royal Society and undergraduate physics students on symmetry in physics and the current status of understanding elementary particles.

PLESIOSAUR FOUND

The Geology Department is host to the fossilised remains of a 200 million-year-old sea serpent discovered near Parnassus during the vacation. The almost complete plesiosaur skeleton will be the key to sorting and classifying hundreds of fragments of fossilised plesiosaur bones found in North Canterbury over the last century.

The discovery was made by Dr Samuel P. Welles, of the Museum of Palaeontology at the University of California, Berkeley, who is a world authority on plesiosaurs, which evolved into 40-foot sea serpents but which died out with the dinosaurs.

"Results have been beyond expectations," said Dr Welles, who was awarded a Fulbright grant to come to New Zealand last year. This visit was sponsored by the Geology Department, with support from the Zoology Department and assistance from the Canterbury Museum and the New Zealand Geological Survey.

Dr R.S. Bigelow, a reader in the Zoology Department, has returned home encouraged by the reception of his book, *The Dawn Warriors* in North America and Britain. "It may not be a best-seller, but I'm sure it will get a broad and fair hearing, which is all I have ever hoped for it," said Dr Bigelow.

The book, which was published in the United States and London late last year, is written for the general public, but is a serious attempt to formulate a theory of human evolution which Dr Bigelow believes to be important and, in the end, hopeful. It has claimed considerable attention from reviewers and Dr Bigelow was interviewed on five television and eight radio networks during his trip, which was made at the invitation of the publishers. One of them was a "Camera Three" interview with Professor Carleton Coon, a leading American anthropologist. In Toronto he appeared on "Luncheon Date" with Elwood Glover, "Take 30" with Adrienne Clarkson and "Topic" with Norm Perry and Carole Turner, a former "Miss Canada". In Glasgow he appeared on the only British television show devoted to books.

For radio, he made a tape in London with the British author, Leigh Crutchley, which was sent to New Zealand, Australia, Canada and South Africa, as well as to British stations. In Toronto, he was interviewed on the Bruno Gerusi show, on "Assignment" with Bill McNeill; on the Helen Hutchinson show; and on the Don Sims show (for 55 minutes) with Gordon Jones as moderator and Jim Murray (Executive Producer of the CBC radio show "The Nature of Things") as guest. In New York he was interviewed by Dick Pyatt for WNYC, and on WOR on the John Wingate show, both large New York radio networks. He was also interviewed in New York by Jack Banning for a series of brief radio "spots" for American University radio stations across the country.

The Dawn Warriors has recently been purchased by a Dutch publisher, and negotiations are still under way with Swedish, French, Italian and Japanese firms, and for paperback editions. It has been reviewed in the London *Daily Express*, *Daily Mail*, *Daily Telegraph*, *Sunday Telegraph*, *The Times* and the *Guardian*. A brief review will appear in the magazine *Vogue*.