1908.

NEW ZEALAND.

EDUCATION:

THE UNIVERSITY OF OTAGO.

("THE UNIVERSITY OF OTAGO ORDINANCE, 1869.")

[In continuation of E.-7, 1907.]

Presented to both Houses of the General Assembly by Command of His Excellency.

Visitor.—His Excellency the Governor.

Council.

Appointed by His Excellency the Governor in Council—His Honour Mr. Justice Williams, M.A., LL.M. (Chancellor); J. Allen, M.A., M.P. (Vice-Chancellor); J. Roberts, C.M.G.; T. M. Hocken, M.R.C.S., F.L.S.; D. Stewart; L. W. Harris.

Elected by graduates—Rev. A. Cameron, B.A.; T. K. Sidey, B.A., LL.B., M.P.; Rev. W. Hewitson, B.A.; Robert Church, M.D., Ch.B.

Elected by the professors—Professor J. H. Scott, C.M., M.D., M.R.C.S., F.R.S.E.; Professor J. Shand, M.A., LL.D.

Professors.

Natural Philosophy, J. Shand, M.A., LL.D.; Chemistry, J. G. Black, M.A., D.Sc.; Anatomy, J. H. Scott, C.M., M.D., M.R.C.S., F.R.S.E.; Mining and Mining Geology and Director of the School of Mines, James Park, M.A.I.M.E., M.I.M.M., F.G.S.; Biology (also Curator of the University Museum), W. B. Benham, D.Sc., Lond., M.A., F.Z.S.; Mental and Moral Philosophy, Rev. W. Salmond, M.A., D.D.; Mathematics and Mechanics, D. J. Richards, M.A.; English Language and Literature, T. Gilray, M.A., F.R.S.E.; Physiology, J. Malcolm, M.D., Ch.B. Dentistry, also Director of the Dental School, H. Percy Pickerill, M.B., B.Sc.; B.D.S.; L.D.S.

Lecturers.

French, Geo. E. Thompson, M.A.; German, F. H. Campbell, M.A.; Hebrew, Rev. M. Watt, M.A., D.D.; Practice of Medicine, D. Colquhoun, M.D., M.R.C.P., M.R.C.S.; Medical Jurisprudence and Public Health, F. Ogston, M.D., C.M.; Midwifery and Diseases of Women, F. C. Batchelor, M.D., M.R.C.S., L.R.C.P., L.M., L.S.A.; Materia Medica, E. E. Blomfield, M.D., B.S., Lond., M.R.C.S., L.R.C.P., Eng.; Pathology, W. S. Roberts, M.R.C.S.; Ophthalmology, H. L. Ferguson, M.A., M.D., &c.; Surgery, L. E. Barnett, M.B., C.M., F.R.C.S. Eng.; Mental Diseases, F. T. King, M.B., C.M., B.Sc.; Clinical Medicine and Clinical Surgery, the Honorary Medical and Surgical Staff of the Dunedin Hospital; Metallurgy and Assaying, D. B. Waters, A.O.S.M.; Geology and Mineralogy, P. Marshall, D.Sc., M.A.; Constitutional History, A. R. Barclay, M.A., LL.B., M.P.; Jurisprudence, Wm. Grant Hay, LL.B.; Education, D. R. White, M.A.; Political Economy, H. D. Bedford, M.A., LL.B.; Tutor in Medicine, W. M. Macdonald, M.B., C.M.; Tutor in Surgery, W. Newlands, M.B., Ch.B., F.R.C.S., Edin., B.Sc., M.A., N.Z.; Classics, T. D. Adams, M.A.

Registrar—W. A. Mason.

THE CHANCELLOR OF THE UNIVERSITY OF OTAGO TO HIS EXCELLENCY THE GOVERNOR.

YOUR EXCELLENCY,— University of Otago, Dunedin, June, 1908.

In compliance with the provisions of "The University of Otago Ordinance, 1869," I have the honour to forward to Your Excellency the report of the proceedings of the University of Otago for the year ending the 31st March, 1908.

Council.—I regret to have to report that during the year Dr. Robert Burns, who has faithfully served in the Council from 1869 to 1907, was removed by death. Your Excellency in Council has been pleased to appoint Mr. John Roberts, C.M.G., for a term of five years from the 1st May, 1907, in the place of the late Dr. Burns. I also regret to inform you that Professor Sale, one of the earliest professors appointed, had through advancing years to give up teaching and resign his seat on the Council. Under agreement made with Professor Sale at the time of his appointment

the Council was enabled to retire the Professor with £300 per annum during his lifetime. On the 4th April, 1908, the Professorial Board elected Dr. J. H. Scott to the seat on the Council vacated by Professor Sale. The Council reappointed Mr. T. K. Sidey, M.P., and Dr. Church its representatives on the High School Board; and Mr. J. Allen, M.P., Vice-Chancellor, was appointed to the New Zealand University Senate in place of Professor Sale.

Staff.—The Council noted with great satisfaction honours that have come to two members of the staff. Professor Benham has been made a Fellow of the Royal Society, and Dr. Colquhoun Fellow of the Royal College of Physicians. During the year Dr. Riley resigned his position as Tutor in Surgery, and Dr. W. Newlands was appointed in his place. The Council did not see its way to select a Professor of Classics owing to want of necessary funds. Satisfactory arrangements have, however, been made with Mr. T. D. Adams, a graduate of Otago University, to take the lectures in Latin, and with Mr. James Dunbar in Greek. Dr. Pickerill arrived in the Dominion on the 14th September, 1907, and commenced his work as Director of the Dental School on the 16th September. Dr. Pickerill has been given the status of professor. The salary of Mr. F. H. Campbell, Lecturer on German, has been raised to £75 per annum. Mr. G. E. Thompson, Lecturer on French, was given leave of absence during the first three weeks of the session to enable him to visit Europe. In this connection I desire to draw Your Excellency's attention to the value which must accrue by professors either exchanging with those of the Mother-country or having facilities given to them for visits to older lands. Victoria University communicated with my Council on this subject during the year, and I should be pleased to hear that some provision could be made for this purpose.

The number of those who give honorary assistance to the work of teaching in the Otago University continues to increase. This year Messrs. H. A. Dodgshun, T. A. Hunter, C. W. Hay, F. Throp, T. Glendining, F. Armstrong, O. V. Davies, J. Dunlop, H. D. Brewer, A. Thompson, A. J. Chrystall, and Dr. H. Ziele have been appointed on the staff as honorary dental surgeons; Dr. Stuart A. Moore and Dr. Fitchett as honorary anæsthetists; Dr. Colquhoun as honorary physician; and Dr. Barnett as honorary surgeon to the Dental Hospital.

Report of Chairman, Professorial Board.—This year a report from the Chairman of the Professorial Board is forwarded; and particulars of attendance, degrees, scholarships, and prizes will be found in it. The Council has been able to raise the annual value of the Richardson and Macandrew Scholarships to £30 as from 1st April, 1908.

Research Scholarships.—In my report of last year the necessity for provision to carry on post-graduate work was referred to, and I note with great pleasure the establishment by Parliament of Research Scholarships. Immediately on being informed, the Council constituted the Board, with Professor Park as Chairman. To give full value to this research-work it will be necessary to make the latest literature on the question for research available to the student either by strengthening the local libraries or by some means of circulating the necessary literature.

Dental School.—I am pleased to be able to report that the school is being very successfully conducted. The building, equipment, and protection of the river-bank cost £478 7s. 11d. more than was provided by Parliament and the contribution of the Dentists of New Zealand. Further equipment is urgently needed to keep pace with growing requirements. This has been represented to the Minister of Education, and it is hoped provision will be made on this year's estimates. It is hardly necessary to point out that the school, as the only training institution in the Dominion for dentists, must be up to the standard of similar institutions in older lands if the results are to be what the University may be proud of.

Shortly after Dr. Pickerill's arrival a dental faculty was created, with Dr. Pickerill as Chairman, and the teachers and honorary staff as the other members. The faculty will advise the Council on any matter relating to the Dental Hospital and the training of dental students. Arrangements have been made for the extraction and filling department to be open during the vacation. Certificates of attendance are granted for post-graduate work. The official opening of the Dental School by the Hon. G. Fowlds, Minister of Education, took place on the 4th April, 1908. Your Prime Minister was also present. Outside interest continues in the school, as is evidenced by the fact that the Odontological Society gave the cases for the Museum, and the New Zealand Consolidated Dental Company have intimated their intention to present a dental chair.

Mining School.—My Council is grateful to Parliament for the vote of £4,000, supplemented later on by an assurance from your Minister of a further £1,000, towards the new Mining School building. The contract has been let for £4,363, and the building is in process of erection. Further particulars will be found in the report of the Director, which is attached.

Medical School.—This school continues its good work. Improvement in the facilities for teaching will result from the establishment of a Maternity Home in Forth Street, towards which the Council has agreed to pay £25 per annum for cost of material, &c., used by students.

In last year's report reference was made to the necessity for the representation of the Council on the Board of Hospital Trustees. The interests of the school are so closely bound up with the Hospital that I again respectfully draw your attention to this matter.

Veterinary School.—Correspondence has taken place with the Minister of Lands and the Minister of Education on this question. Interviews have been held with Mr. Gilruth, and quite lately with the Inspector-General of Schools. As a result the Minister of Education has been informed that the Council is willing and anxious to establish the school, will find a site, and, if the necessary funds are provided, will arrange a complete course which will be recognised by the Royal College of Veterinary Surgeons, and also a subsidiary course for the training of Inspectors of the Agricultural Department; this course to occupy about nineteen months, including two winter sessions and one summer. There seems no reason, other than the want of the necessary funds, why New Zealand should not at once commence the training of veterinary experts and well-trained Inspectors for the Agricultural Department; and it may be hoped Parliament will make the necessary provision this year.

Other Schools.—Owing to a request made by the Otago Education Board, Dr. Benham, F.R.S., with the entire approval of the Council, arranged for a course of lectures for teachers on natural history. An elementary mathematical class of five hours per week has been instituted.

Finance.—The method of book-keeping has been reorganized during the year, and various adjustments of accounts have been made, which result in complete separation of general and endowment accounts.

The Council is grateful to the City Council for the remission of half of the water rates, but would have been still more pleased had the City Council seen its way to remit the whole, as has been done the last few years. The Council's lessees in Dunedin have been put in a more satisfactory position by the passing of the Reserves and other Lands Disposal Act of 1907, by which certain disused streets and small parcels of land formerly covered by the Leith were vested in the Council.

The debenture debt of £11,000 becomes due on the 31st December, 1908.

The accounts, duly audited, and a statement by Dr. Shand, the Honorary Treasurer, are attached.

Benefactions.—Under the will of the late Arthur Beverly the Council becomes possessed of a valuable property in Dunedin, the estimated value of which amounts to some £15,000. It was Mr. Beverly's desire that the "teaching of the mathematical, mechanical, and physical sciences and subjects akin thereto, and then the natural sciences in their various branches," should specially benefit by the bequest. Mr. Beverly also expressed a preference for the founding of scholarships to encourage young persons of good moral character who have talent and industry, but have not wealth. In addition to the property above referred to, Mr. Beverly left books, telescope, and other instruments to the Council.

Dr. Colquhoun and others during the year presented a small statue of the late Cecil Rhodes.

The widening interest of the public and of individuals in the University is very encouraging; and, in order that Your Excellency may appreciate the growth, I append a list of benefactions, which was prepared at the direction of the Council this year.

Received from private sources, in addition to the list of scholarships and prizes already contained in the calendar:—

Date.	Donor.	Amount.	Object.
		£	
1903	Public subscriptions, *Evening Star* fund...	820	Extinction of floating debt.
1903	Trustees, Dunedin Savings-bank ...	6,500	Endowment.
1904	Wolf Harris, Esq.	2,100	Endowment, Chair of Physiology.
1904	Mrs. Lothian (bequest)	600	Endowment.
1905–6	Public subscriptions— *Otago Daily Times*	2,120	Buildings and endowment.
	Citizens' Fund	2,080	
1906	New Zealand Dentists	1,000	Dental School building.
1907	Arthur Beverly, Esq. (bequest) ...	15,400 (estimated)	Teaching of mathematical, mechanical, and physical sciences, &c., and scholarships.

Dr. Hocken's Gift.—During the year the Council accepted responsibility for the care and preservation of the valuable collection presented to the public of New Zealand by Dr. Hocken, and the necessary trust deed was completed. I have pleasure in reporting that the building, being an addition to the Museum, is in process of erection.

I would again draw attention to the fact that the University has control and responsibility of the Museum, but that the provision made for the cost of upkeep is inadequate. I would respectfully urge that a further allowance be made by Parliament for this important institution.

Students' Building.—Reference is made in the report of the Chairman of the Professorial Board to the need of a students' building and further class-rooms. With regard to the former, negotiations are still in progress with the Students' Association and the members of the University Christian Union. The latter body proposed to raise £1,500, and asked the Council to subsidise by £1 for every £1 raised. As the Council had no means, the matter was referred to Your Excellency's Government. It may have appeared to the Minister that the subsidy was asked for a building to be erected and controlled by the University Christian Union, and in consequence an unfavourable answer was returned: it is now proposed that any building erected should be under the control of the Council, both the Students' Association and the University Christian Union being called on to assist the Council. The need for such accommodation is very great, and I trust your Minister may reconsider the matter, and assist the voluntary effort by which it is proposed to raise half the funds necessary.

Conclusion.—In conclusion, it is with pleasure I assure Your Excellency of the vigorous life of the Otago University. Much has been done, but much more requires to be done to keep pace with growing requirements. The faculties already in existence are developing, and their needs grow. I feel that the University cannot be fulfilling its highest function till it comes even more closely in touch with the life, professions, and businesses of the people; and particularly does it seem expedient at the present time to develop the teaching-power, so that it may in time bring knowledge and influence to bear upon veterinary, farming, and agricultural pursuits.

Addendum.—Since the 31st March, 1908, the Grey Russell Scholarship has been awarded to Henry W. Slater, the Richardson Scholarship to William M. Stewart, the Women's Scholarship to Mary Shand Watt, and the MacGregor Prize to William H. Uttley.

I have much pleasure in informing Your Excellency that a few days ago Alexander Gordon Macdonald, A.O.S.M., B.E., was awarded the first scholarship—the Research—to cover the brown coals of Otago, in relation to their geological ocurrence, chemical and physical characters, mining and market conditions, present uses and economic possibilities.

JOSHUA STRANGE WILLIAMS, Chancellor.

PROFESSORIAL BOARD: REPORT OF THE CHAIRMAN (PROFESSOR THOMAS GILRAY, M.A., F.R.S.E.).

I HAVE the honour of submitting a general report on the work of the University during the academical year that ended on the 31st March, 1908.

Statistics of Attendance.—The Registrar has supplied the following statistics for session 1907: Number of students in arts and science, 223; in medicine, 86; in dentistry, 2; in mining, 12: total (males 207, females 116), 323. Matriculated students—males, 173; females, 107: total, 280. Non-matriculated students—males, 34; females, 9: total, 43.

Note: As there is a discrepancy between the number of students in the Mining School given by the Registrar and the number given by Professor Park, the Director of the School, in his annual report, I may explain that some of our art students attend the geology class. Geology, in addition to being a mining subject, may also be taken as a subject for B.A., B.Sc., M.A., and M.Sc., in connection with the New Zealand University degree examinations.

Changes in the Teaching Staff.—On the 31st March, 1908, Professor Sale retired from the active discharge of his duties as Professor of Classics—an appointment he had held since 1870, the year in which the work of the University of Otago was formally begun, it having been founded in the previous year. Professor Sale's retirement is, I believe, the greatest loss the University has sustained since its foundation. He was educated at Rugby School and afterwards at Trinity College, Cambridge, where he took his degree in 1854 with first-class honours in classics and second-class honours in mathematics. In 1856 he was elected a Fellow of Trinity College, the most famous of the Cambridge colleges; and in 1857 he was appointed Lecturer on Classics. Professor Sale filled the Chair of Classics in Otago University with great credit and distinction, and he has also rendered other services of the highest value to the institution. His profound classical learning, his sagacity in counsel, his strength of character, his unflinching courage, his transparent honesty, and his fidelity to his colleagues and other friends make him a singularly memorable figure in the academic history of New Zealand; and his colleagues regard him with feelings of the greatest esteem and deepest affection, and trust he may be long spared to enjoy his well-earned rest. In addition to discharging his duties as a member of the teaching staff with the highest efficiency, Profesor Sale acted as Chairman of the Professorial Board from 1895 to 1898, as a member of the University Council from 1894 to 1908, and as a member of the Senate of New Zealand University from 1878 to 1908, a body of which he was one of the most influential members. In the admirable speech delivered by Dr. Shand on the 30th October, 1907, at the valedictory presentation to Professor Sale, he pointed out that it is to Professor Sale that we owe what may be called the distinctive feature of New Zealand University education—namely, the appointment of British experts in the various subjects as examiners and the sending of the students' examination-papers to Britain. Whatever thoughtless cavillers may say, this feature of our system gives New Zealand University degrees a value that no other colonial degrees possess—a value similar to that of the University of London, which have always enjoyed a very high reputation. When the history of university education in New Zealand is written, no name will occupy a more honourable position in the record than that of Professor Sale.

The work of the Chair of Classics is at present shared by two gentlemen appointed by the University Council—Mr. Tom Dagger Adams, M.A., Lecturer on Latin; and Mr. James Dunbar, Lecturer on Greek. Both of these gentlemen have a high reputation as scholars and teachers, and the very best results are expected from their work.

Last September Dr. Pickerill arrived, and at once entered on his duties as Director of the Dental School. Subsequently, at a meeting of the University Council held on the 7th October, it was resolved, on the recommendation of the Dental Committee, "That Dr. Pickerill should be designated Professor of Dentistry, and also Director of the Dental School."

Elementary Class in Mathematics.—As it has been felt for some time that an elementary class in mathematics for students not sufficiently advanced to undertake the whole B.A. work within the limits of a single session is a desideratum in our curriculum, such a class was proposed last session by the Professorial Board, and was sanctioned by the University Council; and it now daily meets at 5 p.m. This class, which counts for keeping terms, is called the "Junior Class," the class doing the whole work for B.A. being now called the "Senior Class"—not the "Junior," as formerly.

General Statement of Academic Results.—It gives me great pleasure to inform the Council that session 1907 is one of the most successful of the thirty-seven sessions during which the University has been in existence. As a result of the Arts and Science Examinations held by the Home examiners in November, 1907, and of the Examination in Medicine held in January, 1908, by examiners resident in New Zealand, 15 of our students have taken the degree of Bachelor of Arts, 6 have taken the degree of Bachelor of Science, 2 have taken the degree of Bachelor of Engineering in Mining, 1 has taken the degree of Bachelor of Engineering in Metallurgy, 9 have taken the degree of Bachelor of Medicine and Bachelor of Surgery, 9 have taken the degree of Master of Arts with honours, 2 have taken the degree of Master of Science and honours in science, 4 have taken the pass degree of Master of Science, and 1 has taken the degree of Doctor of Medicine. Two of our students have won Senior Scholarships—the John Tinline Scholarship has been awarded to an Otago student (William Tremere Foster); and the 1851 Exhibition Science Scholarship has been awarded to an Otago student (Alexander Moncrieff Finlayson) for the fifth time since it was founded.

Winners of Scholarships and Prizes in the University of Otago (Session 1907).—The Macandrew Scholarship (Political Economy), Thomas Joseph Griffen; the Stewart Prize (Mental Science), Elizabeth Gordon; the Ulrich Memorial Medal (Mineralogy and Petrography), Edward Fletcher Roberts; the MacGregor Prize (Mental Science), Charles Alexander Stewart; the Parker Memorial Prize (Biology), Gladys Christian Mary Cameron; the James Clark £7 Book Prize (Latin), William Alexander; the James Clark £7 Book Prize (English), Arthur Watt; the James Clark £7 Book Prize (Mental Science), Henry Havelock Cornish.

Successes in Games and Athletics.—During session 1907 our first fifteen team of Rugby footballers, after a brilliant season, won, for the second year in succession, the Premiership of the Dunedin Clubs, and thus gained the Senior Grade Banner.

The Men's and Ladies' University Hockey Clubs are very flourishing institutions, and have supplied a felt need in the University. In 1907 the men's club again secured the premier position among the Dunedin clubs, and thus won, for the second time, the MacLean Challenge Cup for Hockey. In the midwinter recess the men's club had a most successful tour in the north, and gave a very good account of themselves even against clubs of long standing.

Tennis and fives have also been played as usual.

At the Intercollegiate Tournament held in March, 1907, at Auckland, the Athletic Shield was won by the Otago University athletic team for the third time in succession.

Successes of Former Students.—Under this head I intentionally exclude the successes of former students in passing examinations for British diplomas and degrees in medicine and in gaining important appointments in medicine and mining, as these matters properly belong to my colleagues, Dr. Scott (Dean of the Faculty of Medicine) and Professor Park (Director of the Mining School). Mr. James Allan Thomson, the first of New Zealand's Rhodes Scholars, has been appointed Lecturer on Geology in St. John's College, Oxford, and Demonstrator in Petrology to the University of Oxford. He has also been elected a Fellow of the Geological Society. The Hon. John George Findlay, LL.D., Attorney-General, and Saul Solomon, Esq., have been appointed K.C.s. Several of our athletes and footballers have distinguished themselves in Great Britain. I may mention more especially George Martin Chapman, of Caius College, Cambridge, who, having played in the annual match against Oxford in December last, has won his "blue" as a Cambridge University Rugby footballer; and Colin Macdonald Gilray, of University College, Oxford, who, having been included in the Scottish National Team that defeated the English team in the annual Rugby football match, has thus won his "cap" as an International Rugby footballer.

Honours to the University Staff.—It gives me peculiar pleasure to mention that two esteemed colleagues have been selected for special honour by Home institutions of the highest standing, Dr. Benham having been elected a Fellow of the Royal Society, and Dr. Colquhoun having been elected a Fellow of the Royal College of Physicians. We tender our hearty congratulations to these gentlemen.

Beverly Bequest.—In September last the Council was informed that the late Arthur Beverly, a modest and retiring gentleman of remarkable scientific gifts and acquirements, had bequeathed the greater part of his property to the University of Otago for the teaching of mathematical, mechanical, and physical sciences, and for the founding of scholarships. This welcome gift, which is valued at over £15,000, will, if wisely allotted and administered, prove an immense boon to the University, and will immortalise the name of the generous donor in connection with Otago's principal educational institution.

Research Scholarship.—During the year under review the New Zealand Education Department has taken a very important forward step by establishing four Research Scholarships—one to be open annually for competition at each of the four University colleges. A strong Board has been appointed, of which Professor Park is Chairman, to undertake the management of the Otago University Scholarship. The scholarship, which is of the value of £100 a year, is tenable for two years, with a possible extension to three years, and is open only to graduates, the Education Department having very wisely decided that the proper time for original research is *after* graduation, when the holder of the scholarship will be presumably a well-educated man, thoroughly grounded in scientific principles and methods, and having a sound knowledge of the results reached by earlier scientific workers. The Government of Sir Joseph Ward is to be heartily congratulated on establishing these scholarships. This action of the Government is only one among many gratifying proofs of the increasing sensitiveness of the Ministry to the needs and importance of the higher education. The holders of these scholarships must devote their whole time to some form of research that is likely to be of benefit to the industries of the Dominion.

Institutions and General Life of the University.—In addition to the athletic clubs, the other University institutions for the benefit of students, such as the executive of the Students' Association, the Debating Society, the Christian Union, and the Kahanga Club, have met regularly as usual, and have had very successful sessions. During the year under review the Dental School has begun what we all hope will be a long and prosperous career. Professor Pickerill has entered on his duties with great vigour and enthusiasm, and his well-directed zeal will doubtless have a most beneficial effect on the students and on the school generally.

In March last it was found, when the tenders for the new building for the School of Mines were considered, that the Government grant of £4,000 would not be sufficient for the erection of the building. The Government was accordingly informed of the position, and on the 13th of the month a telegram was received from the Minister of Education (the Hon. George Fowlds) intimating that the Cabinet had authorised a grant of an additional £1,000 for the school. The timely generosity of the Government enabled operations to be begun at once, and by the beginning of next session a thoroughly suitable and well-equipped building will be ready for the staff and students. The Otago School of Mines, which possesses an able and enthusiastic staff of teachers, is bound, when it enters its new building, to become increasingly useful and prosperous. It is

to be hoped in this connection that before very long the Government's vexatiously severe regulations bearing on underground work will be relaxed. These regulations are at present the main hindrance to the success of our mining school, and they drive the great majority of our holders of diplomas in mining out of New Zealand.

As I explained the relation of the Dunedin Training College to the University in my last year's report, I may simply say here that the Training College students derive great benefit from their connection with the University, and that the important experiment initiated by the Education Department some years ago is thus amply justified by the results.

I have great pleasure in expressing my appreciation of the tone and good conduct of the students during the past year. In Otago University, students and teachers are a happy family, and get on remarkably well together. This has been increasingly the case during the last ten or twelve years, and is, I believe, one of the chief reasons why the University has now reached such a high state of efficiency.

Chief Needs of the University at the Present Time.—(1.) Two additional class-rooms: The University of Otago is unfortunately a very badly planned building. One of the results of this is that we have one class-room—namely, the Chemistry Lecture-room—that is really far too large for the purposes of ordinary class-teaching, while almost all our other class-rooms are too small. Between 5 and 7 p.m., when our attendance is at its maximum, some of the class-rooms are already uncomfortably crowded, and if the classes continue to increase we shall soon be very awkwardly situated as regards accommodation. We urgently require two additional class-rooms, and, when it is possible to give us these class-rooms, they should be of a size somewhat in advance of present requirements—they should, in short, be planned on such a scale as to afford comfortable accommodation for about eighty students each.

(2.) A students' building: I wish strongly to emphasize what I said last year about the deplorable accommodation in the University building for the comfort of students. We require a really good building with a first-class gymnasium, a reading-room, a hall for meetings, cloak-rooms, committee-rooms, lavatories, &c. It is estimated that such a building would cost about £6,000, and we believe that if £3,000 could be raised in Otago by the friends of the University the Government would probably be willing to supplement this by a pound-for-pound subsidy. The members of the Professorial Board are unanimously of opinion that this building, when we get it, should be controlled by the executive of the Students' Association, subject to the approval of the Professorial Board and of the University Council. We gratefully acknowledge that we owe a great deal in the past for efficient help to the editors of the *Otago Daily Times* and *Evening Star*. Perhaps these gentlemen may see their way to give us their powerful assistance in this movement, which is really of incalculable importance to the welfare of the University. Certainly nothing is more urgently required by us at the present time than a suitable building for the use of students.

(3.) Chair of Pathology: The prosperity of our Medical School, of which we are all proud, is a matter not only of local or provincial but of national concern. I believe that my medical colleagues are unanimous in thinking that the next great need of the Medical School that will have to be faced sooner or later is the foundation of a Chair of Pathology. This, however, is a large question, which I prefer to leave in the more competent hands of my esteemed colleague, Dr. Scott (Dean of the Faculty of Medicine).

(4.) An increased grant for the Mining School: Now that the Government has generously provided funds for the erection of a suitable home for our Mining School, and has thus banished all fear of the removal of the school from Dunedin, the only thing essential to the increased efficiency and prosperity of the school is an increase in the annual grant. I understand that an annual grant of £1,000 would be sufficient to meet all present requirements.

(5.) Teaching of elocution: In my last year's report I drew attention to the fact that, while we give our students excellent instruction in many branches of knowledge, we are doing little or nothing to assist them in communicating this knowledge to others by trained efficiency in public speaking. Any instruction the students get in this art they give to each other in their Debating Society. I believe it is very important that the efforts of the Debating Society should be supplemented by systematic instruction in voice-production, elocution, and public speaking. The importance of such instruction to the citizens of free communities can scarcely be overrated, and it is very desirable that our educated youth should receive training that would qualify them to take their place among the future leaders of the public in the Dominion. I trust that this matter will receive the early attention of the Council.

For some of the needs I have mentioned we shall sooner or later have to approach the Government, but surely it is not too much to hope that some of our wealthy public-spirited citizens in Otago will come to our assistance, and thus emulate the princely generosity of Mr. Ross to the Presbyterian Residential College.

SCHOOL OF MINES: REPORT OF THE DIRECTOR (PROFESSOR JAMES PARK, M.INST.M.M., M.A.INST.M.E., F.G.S.).

THE Director reported as follows:—

The Mining School for the year ended 31st December, 1907, showed an attendance of 21 students, of whom 19 were matriculated students of the University of New Zealand. Of the 21 registered students, 6 attended one subject only—namely, 1 in assaying and 5 in geology. Six students in their final year completed the full course in the division for which they had entered; and 2 in the final year failed to pass in all the subjects required to qualify for the associate diploma.

Annual Examinations.—Twenty students presented themselves for examination in twenty-one subjects, and of these one failed in senior surveying and one in mineralogy.

Diplomas and Certificates.—Nine graduates of the Mining School, having presented satisfactory certificates of time spent in practical work, as required by the regulations, were awarded the Diploma of Associate—namely, four in mining, four in metallurgy, and one in geology. The Certificate of Land and Mine Surveyor was granted to two graduates, and the Certificate of Metallurgical Chemist and Assayer to one student. The names of the students to whom diplomas and certificates were issued are as under: Philip Hastings McDouall, B.E., Certificate of Land and Mine Surveyor; Urquhart B. Inglis, A.O.S.M., Diploma of Associate in Metallurgy and Certificate of Metallurgical Chemist and Assayer; Gowan L. Hercus, Diploma of Associate in Metallurgy; John F. McPadden, B.Sc., Diploma of Associate in Mining; A. M. Finlayson, M.Sc., Diploma of Associate in Geology; Oluf Moen, A.O.S.M., Diploma of Associate in Metallurgy; Alfred L. Heale, Diploma of Associate in Mining; E. D. Isaacson, Diploma of Associate in Mining; Norman M. Shand, Diploma of Associate in Mining, Diploma of Associate in Metallurgy, Certificate of Land and Mine Surveyor. The diplomas granted in the division of mining, metallurgy, and geology since 1887 are as follows:—Mining: Issued up to end of 1906, 78; issued in 1907, 4: total 82. Metallurgy: To end of 1906, 38; 1907, 4: total, 42. Geology: To end of 1906, 13; 1907, 1: total, 14. Grand totals: To end of 1906, 129; 1907, 9; total, 138.

Appointments obtained by Old Students.—The number of remunerative appointments obtained by our old students in 1907 is greater than in any other year since the establishment of the school. It is a pleasure to state that men holding our associate diploma are held in good repute in all parts of the globe. A gratifying feature that is becoming more marked with each succeeding year is the tendency to appoint New Zealand mining graduates to places of responsibility within the Dominion. Thus, of seven Inspectors of Mines employed by the New Zealand Mines Department in various parts of the Dominion, no less than four are New Zealand mining graduates, and the number is certain to increase. New ideas permeate in a democratic community slowly and laboriously, but at last we have clear signs of a growing conviction that the men who are competent to hold responsible places abroad must be competent to fill the responsible places at home. We are deeply indebted to the Hon. Mr. McGowan, Minister of Mines, for the part he has played in breaking down the prejudice that so long existed against New-Zealand-trained men.

All the graduates of 1907 have been successfully placed, and the director finds an increasing difficulty in supplying men for the appointments that are put under offer through him. The names of the old students placed last year, and the nature of their appointments, is given below: Kenneth Graham, A.O.S.M., topographical surveyor, New Zealand Geological Survey; J. H. Adams, B.Sc., Assistant Geological Surveyor, New Zealand Geological Survey; Kenneth Graham, A.O.S.M., Government Surveyor, Java; T. H. B. Wayne, A.O.S.M., Consulting Engineer, Durban; S. Napier Bell, A.O.S.M., metallurgist, Peak Downs Copper Company, Queensland; D. V. Allen, B.Sc., A.O.S.M., Director, Zeehan School of Mines; J. Allan Thomson, B.Sc., A.O.S.M., Lecturer in Geology, St. John's College, Oxford; H. C. Boydell, B.Sc., A.O.S.M., lecturer, Kalgoorlie School of Mines, West Australia; W. Gibson, B.E., A.O.S.M., lecturer, Waikino School of Mines; Edward Iles, A.O.S.M., acting-lecturer, Thames School of Mines; U. B. Inglis, A.O.S.M., manager, Targinnie Gold-mining Company, Gladstone, Queensland; C. N. Bolt, B.Sc., engineer of harbour-works, Gladstone, Queensland; O. Gore Adams, B.Sc., A.O.S.M., metallurgist, Santa Isobel, United Gold-mining Company, Colombia, South America; W. A. Baker, B.Sc., Director, Thames School of Mines; Herbert Black, A.O.S.M., metallurgist, Cumberland Mine, South Australia.

The total number of appointments obtained by our students in the past seven years is as follows: 1901, 8; 1902, 7; 1903, 8; 1904, 11; 1905, 13; 1906, 14; 1907, 16: total, 77. Altogether seventy-seven responsible positions have been secured by sixty-two individual students, at salaries ranging for the most part between £300 and £600 a year. The occupations represented in the above appointments are as under: Consulting engineers, 5; mining engineers, 8; assistant mining engineers, 5; general mine-managers, 3; mine-managers, 8; inspectors of mines, 2; geological surveyors, 4; mine-surveyors, 5; land and topographical surveyors, 2; metallurgists, 13; dredge-masters, 2; directors of mining schools, 10; lecturers at mining schools, 10: total, 77. In addition to these posts, thirty of our students occupy in different parts of New Zealand such places as assayers, cyaniders, metallurgical chemists, mine and battery assistants, surveyors, geologists, and engineers' assistants at a remuneration of 9s. or 10s. a day. In these subordinate places our students gain the experience that fits them for more responsible appointments.

New Zealand University Examinations.—The results of the November examinations, so far as they concern our mining students, are as follow: Honours in Science: C. A. Cotton, first class in geology; J. A. Bartrum, first class in geology, third class in physics. Final B.E. (Mining): P. Hastings McDouall, W. Gibson. Final B.E. (Metallurgy): Gerhardt C. Ulrich. The Ulrich Medal for 1907 was won by Edwards F. Roberts. Exhibition Research Scholarship: The 1851 Exhibition Research Scholarship for 1907 was awarded by the New Zealand University Senate to Mr. A. Moncrieff Finlayson, who presented a valuable thesis on "The Gold-bearing Veins of Otago," a subject of great economic importance to the mining industry. Mr. Finlayson has had a brilliant academic career, and the award of this scholarship is a fitting reward for his perseverance. He deserves our most hearty congratulations. This is the fourth Exhibition Scholarship secured by our mining students during the past five years.

Academic Honours and Degrees.—In the past five years our mining students have secured the following academic distinctions: Two Rhodes Scholarships, four 1851 Exhibition Scholarships, four Senior Scholarships of New Zealand University, seven First-class Honours in Science, five Sir George Grey Scholarships, five the M.Sc. Degree, four the B.Sc. Degree, ten the B.E. Degree in Mining and Metallurgy.

Honours in Mining.—The signal success achieved by our graduates in the New Zealand University examinations in recent years is directly the result of raising the standard of the teaching in all the departments in the Mining School to the degree standard in 1901.

The geological is the only division of the school in which "honours" can be secured, and it is for this reason that no honours in mining or metallurgy figure in the above list. Honours in geology are taken in connection with the ordinary B.Sc. degree. By passing two examinations students obtain the pass degree, with the chance of securing in the second examination a New Zealand University Senior Scholarship. As the number of students competing for the annual Senior Scholarship in natural science is commonly small, being seldom more than two or three, it follows that the scholarship is practically a gift to any diligent candidate—that is to say, a student can secure his B.Sc. degree, with a Senior Scholarship added, which enables him to sit for "honours" in the third or final year. And to all of this no objection can be urged in such an important subject as geology. On the other hand, the mining and metallurgical undergraduate is compelled to pass three long examinations before qualifying for his B.E. degree, besides having to spend a year in practical work. He is offered no Senior Scholarship and can obtain no honours, notwithstanding the passing of three examinations, the last two of which require a wide range of professional knowledge of an exact kind. Honours in mining and metallurgy have been granted by the Royal School of Mines and by the College of Science for the past thirty years or more, and of the new English universities those of Birmingham and Leeds provide for honours in mining and metallurgy. Havard grants a D.Sc. degree in mining. Mining is a basal industry. The needs of modern times are so completely dependent on its productions that without it our civilisation could not exist for a day; and yet, despite its dominant position and the magnitude of its operation, its study and pursuit as a profession is seriously handicapped by the statutes of the New Zealand University, as compared with purely academic subjects. This is a survival of the traditional homage so long paid to the learning of the dead languages and abstract sciences in the older universities. The introduction of the physical sciences in the last century paved the way for the applied sciences which now hold an honoured place in the universities of Great Britain, continental Europe, and America. The author, in his annual report for 1906, stated that the New Zealand University at the present time grants senior scholarships and honours in all the purely academic subjects, one senior scholarship and honours in three grades in each, but no scholarships or honours in the subjects relating to applied science, such as economic geology, mining, metallurgy, applied mechanics, surveying, or engineering. This, surely, ought to be remedied. Applied science is the connecting-link between the university and the every-day industrial and professional life, and some incentive should be held out to the graduate in applied science. If the University of New Zealand is to be a living factor in the industrial progress of the Dominion it will be done chiefly through the efforts of its graduates in applied science. To grant scholarships and honours in such fundamental subjects as mathematics, physics, mechanics, and chemistry is admittedly right and proper, but to withhold like reward from the graduate who chooses a course in which the principles of these subjects are applied is a phase of our university system not in touch with the times in which we live, or in accordance with European usage

The lack of appreciation of applied science shown in New Zealand is perhaps due to the constitution of the University Senate and partly to timidity of isolation. In the representation the academic element is conspicuously dominant, while our isolation prevents a personal acquaintance with the intensely progressive movement that has swept over the universities of Great Britain in the past decade. The older universities are becoming more and more democratic, and frankly realise that they are a co-ordinate part of the general educational system, and exist for something besides mere polish.

New Mining School Building.—After calling the attention of the Council and Ministers to the ruinous condition of the present building for many successive years, the directors find it a pleasure to chronicle that a start has at last been made with the erection of a new building for which a grant of £5,000 has been made by the Government. It is hoped that everything will be in readiness for the formal opening of the new school at the beginning of next session.

Laboratory.—During the past year 134 samples of ore and mineral were assayed for the public by Mr. Waters at schedule rates; and in the same period thirty-seven samples of rock, &c., were examined and reported on by the Director, and some thirty by Dr. Marshall—all free of charge.

Original Research by Staff.—By Professor Park: (1) The Geology of the Cromwell Districts of Central Otago, Bulletin No. 5, New Zealand Geographical Survey—illustrated with ten coloured maps, numerous coloured sections, plates, and forty-seven diagrams—Government Printer, Wellington; (2) Text-book of Mining Geology, second edition—Chas. Griffin and Co., London; (3) Text-book of Theodolite Surveying and Levelling—Chas. Griffin and Co., London (in press); (4) Magnetic Segregation in its Relation to the Genesis of Certain Ore-bodies—Trans. N.Z. Inst., Vol. xxxviii, p. 11; (5) Contact Metamorphism in its Relation to the Genesis of Certain Ore-deposits—Trans. N.Z. Inst., Vol. xxxviii, p. 16; (6) Thermal Activity in its Relation to the Genesis of Certain Metalliferous Veins—Trans. N.Z. Inst., Vol. xxxviii, p. 20; (7) On the Role of Metasomatism in the Formation of Certain Ore-deposits—Trans. N.Z. Inst., Vol. xxxviii, p. 33. By Dr. Marshall: (1) Geological Notes on South-western Otago—Trans. N.Z. Inst., Vol. xxxix, p. 496; (2) Text-book on Geology of New Zealand—Government Printer (in press); (3) The Character and Distribution of Igneous Rock in New Zealand—Trans. Aust. Ass. Ad. Sc., Vol. xiii, 1907.

Acknowledgments.—The Director wishes, in conclusion, to place on record his appreciation of the co-operation of his colleagues in promoting the interests of the institution. His acknowledgments are especially due to Dr. Marshall and Mr. Waters, who have carried on the work in their respective departments with much zeal and conspicuous success.

OTAGO UNIVERSITY MUSEUM: REPORT OF THE CURATOR (DR. W. BENHAM, D.SC.).

The Hocken Wing.—In my last report I gave a history of the movement which will result in the addition of a north wing to the Museum. It has been found impossible, with the funds at the disposal of the Trustees, to build this wing to the height of the original design of Mr. Ross, so that it will now consist of a basement and two floors only. The building was commenced in March, 1908, and should be completed in October. The trustees will, of course, only provide the fittings for the Hocken Library and Picture-gallery on the upper floor; the cases required for the addition to the Museum itself, on the ground floor, will have to be provided from some other source.

The Art Gallery.—The erection of the Public Art Gallery, followed by the removal of the pictures from the room in the annexe, has released this room, which the Council has acquired for a small sum for Museum purposes. I propose to utilise this additional space for an extension of the Ethnological Department, but, unfortunately, though I have specimens, I have no cases in which to exhibit them, so that for the present the room is unoccupied. It would serve excellently as a gallery for Maori objects, and if the carved-house slabs, deposited by Dr. Hocken, at present surrounding the Ethnological Room, were removed from this position and fixed round the walls of the Art Room some resemblance to a Maori house would be given to it. But till funds allow, I fear this plan cannot be carried into effect.

The Collections.—During the summer I was able to avail myself of the services of Mr. David Miller, who kindly agreed to assist me in rearranging the collections of Lepidoptera and Coleoptera in the insect cabinet. The collection of named New Zealand insects was set up a good many years ago, and recently I have taken every opportunity of adding to this collection, originally made by the late Captain Hutton. But many changes in nomenclature have been made, as most of the orders have been revised by Captain Hutton, Mr. Hudson, and others in recent years, hence new labels had to be written, and Mr. Miller spent several weeks, under my supervision, in labelling and arranging the insects in the order adopted by the "Index Faunæ Novæ-zealandiæ," and in adding new ones received by the Museum at intervals during the last ten years. The Museum should have a good representative collection of insects of all orders readily available for reference by people interested, though only a few can be exhibited in the exposed cases; but our present cabinet is scarcely large enough for the moths and beetles—the rest of the insects are accommodated in store-boxes, and a great saving of time and labour would be effected if a second cabinet of the same size could be purchased, for I am constantly asked to name insects by people who naturally look to the curator of a museum for help in this and many other directions. A well-built cabinet could stand in the public room, available for visitors who wished to examine our insects or to compare their own specimens. It would be a great attraction to visitors, for insects well arranged in cabinet-drawers look much more attractive than in large cases, where, too, they soon get bleached.

Scientific Expedition.—At the end of November I joined, by invitation, a scientific expedition inaugurated by the Canterbury Philosophical Institute for the purpose of investigating, among other matters, the geology and natural history of the Auckland and Campbell Islands. The expedition was financed by the Government. Members were carried free on the G.s.s. "Hinemoa," and a report of the results will be published by the Government. During this trip I made a point of collecting examples of terrestrial invertebrates of all kinds, and I am at present engaged in working out certain groups. Earlier in the year I undertook to identify the echinoderms and annelids collected by Mr. E. Waite, of the Canterbury Museum, during the trawling expedition undertaken by the Fisheries Department. In both cases the Museum will benefit by the acquisition of new specimens.

Additions to the Collections.—Among the additions to the exhibits the most important is a restoration of the goose-shaped moa (*Pachyornis elephantopus*), founded on a complete skeleton and covered with emu-feathers. It attracts considerable attention.

Specimens of the mollusc Chiton, showing variation in colour and pattern, depending to some extent on locality, were added. A small octopus, mounted in a natural position, with arms extended; a pouched lamprey; several new echinoderms and molluscs; a few birds, and some less interesting objects were placed in the New Zealand department.

In the general collection I have placed in the mammal case a number of pictures, some of them coloured, of conspicuous and interesting larger animals not represented by specimens, such as hippopotamus, giraffe, camel, elephant, zebra, gorilla, &c. (these are found to interest children); photographs of the restored skulls of extinct ancestral proboscidians (moeritherium, palæomastodon, tetrabelodon), as well as photos of a series of molar teeth of extinct and living herbivora, showing the evolution of the pattern in cow, horse, &c.; also, casts of the skull and feet of the ancestral ungulate hyracotherium.

To the dentition series have been added several skulls from which the bone has been cut away, so as to exhibit the method of tooth-implantation (*e.g.*, hyomoschus, trichosurus, viverrra); small plaster restorations of extinct beasts (plesiosaurus, ichthyosaurus, anchitherium, and others). I have mounted the models of the aquatic reptiles in such a manner as to indicate their habit: the bottom of the stand is covered with sand and gravel, to represent the sea bottom; the sides and top are of glass covered by methyl green, very faintly, to indicate sea-water; the top has a hole cut in it so as to fit against the body of the animal, which was more or less immersed. In the case of ichthyosaurus, which was more subaquatic in habit, only the head and neck of the creature protrudes beyond the top, while the plesiosaurus has the greater part of its body above the surface,

Routine Work.—The taxidermist has been, as usual, engaged in refilling such jars as required it, in remounting specimens in more suitable jars, in repairing skeletons, and in keeping the exhibits generally clean and tidy. As many of the exhibits have to be used in illustration of the lectures and laboratory work in zoology, palæontology, and odontology, and as the students of the Mining School use the cases of minerals for study, a considerable amount of time and labour is involved in keeping the cases and specimens in proper order for public display.

During the latter part of the year the taxidermist was engaged in trying to remount the male seal, which was set up many years ago in a ridiculous and impossible pose—erect on its hind legs. This has long been an eyesore to me, and last year I endeavoured to obtain the male seal exhibited at the Christchurch Exhibition in order to have it mounted in a more natural pose. Failing this, I proposed to the taxidermist to take down the old seal and to try to remount it. Mr. Jennings did his best to carry out my wishes, but the skin was too tough to be moulded in any new way, and it will now be set up on its belly, scrambling over rocks, as if coming out of the sea or basking in the sun on shore.

The attempt involved great labour, and necessitated the employment of outside assistance.

Acquisitions.—(A) New Zealand Zoology: The register contains 325 entries. It includes a large series of specimens, 270 in number, collected by me during the two trips to the subantarctic islands in February and November, 1907. Naturally much of this is already represented in the Museum, but several important novelties were obtained, such as fish-leeches (new to science), jelly-fishes, insects, earthworms, spiders, land-shells, &c., which in due time will be identified and added to the exhibits, or stored for study and reference. From other sources the most interesting are the following: A new species of large land-shell (*Placostylus bollonsi*) from the Three Kings Island; a green lizard, which bore two young ones of quite a different colour-pattern; several echinoderms new to science, of which an account is now ready for publication; some hydrocorallines from Preservation Inlet, including the rare Labiopora, which I sent to Professor Hickson, of Manchester, for description; a Comatula new to the coastal waters of the Dominion; native termites; and several rare or new deep-sea shells.

(B.) Foreign Zoology: There are only eleven entries, including a large African lizard, presented by Mr. Theomin; a Himalayan muntjac, which died in the Dunedin Gardens and was donated by the Superintendent of Reserves; a peculiar crustacean (Anaspides) from Tasmania, given by Mr. G. M. Thomson.

(C.) Palæontology: The eighteen entries include models and casts of various extinct animals, and a set of models of the valves of fossil brachiopods showing the arm-loop. These models, though exhibited, are chiefly used in teaching.

(D.) Ethnology: A small collection of objects from Ceylon, such as personal ornaments, brass utensils, weapons, coins, manuscripts, &c., was purchased through the medium of the Director of the Colombo Museum. Unfortunately I have no cases in which to exhibit these and several other ethnological objects.

List of Donors of Native Specimens.—I have already sent the usual formal acknowledgment of their donations to the twenty-four undermentioned individuals who have been good enough to forward specimens, and I take this opportunity of again tendering them my thanks, and of stating that specimens of even common animals—insects, spiders, shells—are always welcome. In this way it will be possible to retain for our Museum that special character which it already possesses—viz., the only representative exhibit of invertebrates in the Dominion. James Allen, M.P., white-pine borers (Pentarthrium); Captain Bollons—land-snail from the Three Kings (Placostylus); N. L. Buchanan, of Collingwood—nest of mason-bee; Judge Chapman—fragments of skulls of Maori dog; Dr. De la Tour—a rare fish (*Paratrachionthys trailli*); Miss Fergus, Portobello—a lizard (*Naultinus elegans*); Dr. Fulton—birds' eggs, beetle, &c.; C. Gudgeon—harvest-man; A. Hamilton, Director, Dominion Museum—a sea-pen (*Sarcophyllum bollonsi*); J. Horan, of Ruapuke—Crustacea; J. Jeffrey, of Anderson's Bay—termites, several insects, and other animals; J. A. Laird—beetle; Miss Mestayer, of Wellington—a rare annelid (*Chloeia inermis*); A. Michael, —a moth and its caterpillar (*Porina dinoides*), the vegetable caterpillar; W. Brook Oliver, of Christchurch—annelids; Professor Park—a lizard (*Pactylocnemis granulatus*); Captain Post—two land-shells (*Paryphanta hongii*); Percy Seymour, of Cromarty—Labipora, Comatula, and echinids; Mrs. Spender, of Geraldine—small land-shells (*Phenacohelix pilula*); H. Suter, of Auckland—a coral (*Kionotrochus suteri*) and several rare marine shells from deep water; W. Sutherland—shark (*Notidanus indicus*); H. R. Tapley—a stick-insect; T. Taylor, of Koromiko—beetles, worms, lizard, and shells; E. Waite, Curator, Canterbury Museum—starfishes, sea-urchins, and brittle-stars.

General.—The Museum is, with the exception of the Public Art Gallery, the only permanently open free place of entertainment and instruction in Dunedin; it is open daily, Sundays included, throughout the year, having been closed only on Christmas Day, Good Friday, and Labour Day. The public has shown its appreciation of its resources by visiting it in considerable numbers, especially on Sundays and holidays. Teachers, both of town and country schools, are making increasing use of its contents as a means of instruction; and I have been pleased to see that in some cases the children take notes of the exhibits. I would suggest that more teachers should have some definite object in view to which they should direct the attention of the children, for frequently they seem to wander round the cases in rather an aimless fashion.

The conduct of visitors has, I am pleased to note, been all that can be desired.

I hope that in the near future additional interest will be provided by new exhibits in the ethnological department.

Otago Dental School: Report of the Director (Professor H. Percy Pickerill, M.B., B.Sc., B.D.S., L.D.S.).

The Dental School during its first nine months has made an excellent start, and there is every prospect of its fulfilling the highest expectations concerning it and of its work being thoroughly appreciated by that section of the public who are unable to pay the usual fees for dental attention.

The number of students attending has been ten, three of whom being students working for the B.D.S. degree, and the remainder, men who have passed the "Dental Board" Examination, and have come on here for a course of practical training in operative dentistry.

During the period 1,480 operations of all kinds have been performed, and it is satisfactory to note that by far the greater number of these has been in connection with the filling and saving of teeth; 206 have been simple extractions, 80 operations under anesthetics; 40 in connection with the making and fitting of artificial teeth. Four hundred and thirty-eight patients have received treatment; thus there has been an average of 3·4 operations performed for each patient. The number of patients at present under treatment is 240.

Staff.—Ths following were elected to the staff of the hospital in July last: Acting-director, Mr. O. V. Davies, L.D.S.; Honorary Dental Surgeons, Messrs. Throp, Dodgshun, Hunter, Glendining, Hay, Armstrong, and Dr. Ziele. Mr. Davies continued in office until the middle of September, when the Director arrived. At the beginning of this year the following additional honorary dental surgeons were elected: Messrs. Dunlop, Brewer, Chrystall, Thomson; and Mr. Davies was asked by the Council to continue his services as an honorary dental surgeon.

Prospect.—The school has great possibilities, and will before long become one of the most important and well-paying departments of this University. The demand for dentists is not likely to decrease, having regard to the appalling state of the teeth of the rising generation. As the public become more educated the demand for skilled dental surgery increases; and, seeing that a skilled trained dentist cannot treat so many patients per diem (conscientiously) as an unskilled dentist, it follows that the number of dentists must rapidly increase, and, since this school is the only portal in this country to the profession, my previous statement as to the outlook of the school has every probability of being justified.

Requirements.—There is, however, to the above, one most important condition—the school must be equipped in a thoroughly efficient manner; otherwise men will prefer to go Home or to America for their training, seeing that the difference in cost will not be very great. In order that we may successfully compete with the schools in London and Philadelphia, and, indeed, in order that it may be possible at all to train men up to the standard of a B.D.S. degree, it is absolutely necessary that a sum of about £1,600 be spent on equipment. One of the most pressing needs is that of a laboratory, where the more scientific side of dentistry may be taught, such as dental pathology and bacteriology; for, if any advance is to be made at all in checking the disastrous spread of dental caries, it is along such lines that men may be taught to treat dental diseases rationally, and not be merely content to patch up the effects of disease after it has occurred.

Suggestions.—In view of the fact that there is considerably more poverty amongst some of the patients who come under treatment at the hospital that I was led to anticipate, I think it would be desirable that some appeal should be made to the public to provide a fund for the treatment of those patients who cannot afford to pay for themselves. We should not on the latter account be obliged to turn patients away, yet we cannot afford to provide material at a loss to the school. We should, I think, participate in the Hospital Saturday collection. It would also be very desirable that some arrangements should be made with the General Hospital authorities and other charitable institutions whereby patients or inmates who are sent here for treatment may not be too great a burden upon the funds of this school.

Donations.—The Otago Odontological Society have promised a sum of £5 towards the erection of Museum cases. The Consolidated Dental Company of New Zealand have promised a modern operating-chair, the value of which is about £50.

The Medical School: Report of the Director (Professor J. H. Scott, M.D., M.R.C.S.).

Eighty-eight students are attending medical classes during the present session, of whom eight belong to the Dental School. These come from all parts of the colony. Eight students passed their final examination last January, and received the degrees of Bachelor of Medicine and Bachelor of Surgery of the New Zealand University. Of these, Crawford and Rogers are now acting as Junior House Surgeons to the Dunedin Hospital. Shore and Scannell, Brown and Simpson, are House Surgeons to the Christchurch and Wellington Hospitals, while Thomas is acting in a similar capacity in Auckland. Harrison has gone to London to continue his studies.

At its last meeting the Senate of the New Zealand University instituted a Travelling Scholarship in Medicine of the annual value of £150. This should prove of great value to our young graduates.

Dr. Riley has resigned his position as Surgical Tutor to the school, and his place has been filled by Dr. Newlands.

A most important addition to our teaching-facilities has, thanks to the untiring efforts of Dr. Batchelor, been made during the year: students now receive, in the Maternity Hospital in Clyde Street, a thorough training on modern lines before they are allowed to attend confinements outside. This was impossible under the old conditions, and this institution supplies a long-felt want.

The new Physiological Laboratory, under the direction of Professor Malcolm, has proved of great use to the school, and is also made use of by graduates for purposes of research.

The main need of the school at present is a new dissecting-room: the present one is old-fashioned and inconvenient, and is, besides, not large enough for present requirements.

Balance-sheet of the University of Otago for the Year ending 31st March, 1908.

Receipts.	£ s. d.	£ s. d.
Balance, 31st March, 1907		187 8 5
Rents—		
Burwood and Mararoa		1,300 0 0
Barewood		900 0 0
Benmore		3,000 0 0
Forest Hill, Hay		60 0 0
Forest Hill, Miller		16 13 4
Run 79c, Barewood		16 19 6
Castle Street Reserve		273 0 0
Professors' houses		235 0 0
Government Specialisation Fund	2,000 0 0	
Transferred to Dental School Account, £500; transferred to Medical School Account, £1,500	2,000 0 0	
Church Board of Property		1,800 0 0
Fees	3,530 8 6	
Less transferred to Medical School Account, £117 6s. 9d.; less transferred to School of Mines Account, £120 14s. 6d.	238 1 3	
		3,292 7 3
Goldfields revenue		27 2 6
Interest on invested funds	718 5 5	
Less scholarship interest, £129 6s. 2d.; less Wolf Harris Endowment Fund, £94	223 6 2	
		494 19 3
Barewood Timber Account		2 12 0
Interest on Mrs. Lothian's legacy		30 11 6
Incidental receipts		4 13 0
Brokerage on purchase-money Scholarship Trust refunded		13 10 0
Transferred from Dental School Account		82 16 2
		£11,737 12 11

Expenditure.	£ s. d.	£ s. d.
Transferred to Property Sales Account		280 12 5
Salaries, professors and lecturers	8,662 8 8	
Less transferred to Museum Account, £250; School of Mines Account, £1,700; Medical School Account, £3,000; Dental School Account, £132 11s. 5d.; and £273 12s. 3d.	5,356 3 8	
		3,306 5 0
Salaries, assistants	430 7 6	
Less transferred to School of Mines Account, £79 10s.; Medical School Account, £231; Dental School Account, £54 5s.	364 15 0	
		65 12 6
Salaries, office and janitor		389 0 0
Apparatus and material—		
Chemical		29 11 5
Mathematical		2 6 0
Biological		53 18 6
Physical		32 14 9
Repairs and alterations to main building		90 3 11
" " professor's houses		28 17 9
Water, fuel, and light, General Account		93 4 11
Class fees, professors and lecturers		2,656 15 3
Law-costs		8 8 0
Library		164 3 5
Transferred to Ulrich Prize Fund Account		1 6 1
Insurance	51 1 3	
Less transferred to Dental School Account, £2 13s. 6d.; medical School Account, £11; School of Mines Account, £1 4s.; Museum Account, £7 6s.	22 3 6	
		28 17 9
Printing, advertising, and stationery	147 12 8	
Less transferred to Medical School Account, £6 10s. 6d.; School of Mines Account, £8 15s.; Museum Account, £2 15s.; Dental School Account, £19 13s.	37 13 6	
		109 19 2
Bank charges and interest		8 10 9
Transferred to Debenture Coupon Interest Account		495 0 0
Commission to Government for managing reserves		142 8 1
General expenses		120 4 1
Fees refunded		2 19 0
Premium on design, School of Mines		52 10 0
Expenses, Professor Richards (passage, &c.)		110 13 7
Subscription, maternity home		25 0 0
Transferred to Medical School Account		1,960 9 11
" Museum Account		189 14 6
" School of Mines Account		805 1 11
Balance on 31st March, 1908—		
In bank, £474 7s. 8d.; part debentures (£289 9s.), £8 16s. 7d.		483 4 3
		£11,737 12 11

School of Mines.

Receipts.	£ s. d.	*Expenditure.*	£ s. d.
Government subsidy	1,000 0 0	Salaries—	
Fees and mining classes	120 14 6	Director and lecturers	1,300 0 0
Battery returns	0 8 0	Proportion of salaries of professors	400 0 0
Transferred from General Account	805 1 11	Assistant	79 10 0
		Apparatus and material	82 6 11
		Repairs	1 17 0
		Insurance	1 4 0
		Water, fuel, and light	28 11 8
		Apparatus and geological	6 12 4
		Printing, advertising, and stationery	8 15 0
		General expenses	17 7 6
	£1,926 4 5		£1,926 4 5

Dental School.

	£ s. d.		£ s. d.
Fees	241 6 3	Salary—	
Government grant, specialisation	500 0 0	Director	273 12 3
		Interim (O. V. Davies)	132 11 5
		Assistants	54 5 0
		Expenses, Dr. Pickerill	89 11 2
		General expenses	18 10 10
		Apparatus and material	61 1 2
		Printing and stationery	19 13 0
		Insurance	2 13 6
		Water, fuel, and light	6 11 9
		Transferred to General Account	82 16 2
	£741 6 3		£741 6 3

Medical School.

	£ s. d.		£ s. d.
Fees	117 6 9	Expenses	78 15 1
Government grant, specialisation	1,500 0 0	Water, fuel, and light	70 3 8
Interest, Wolf Harris endowment	94 0 0	Salaries—	
Transferred from General Account	1,960 9 11	Professor and lecturers	2,400 0 0
		Assistants	231 0 0
		Proportion of salaries of professors of biology, chemistry, and physics	600 0 0
		Printing and stationery	6 10 6
		Repairs and alterations	42 17 7
		Insurance	11 0 0
		Apparatus and material—	
		Physiology	117 13 0
		Pathology	8 6 1
		Materia medica	18 14 6
		Anatomy	66 0 2
		Surgery	5 18 1
		Gynaecology	14 18 0
	£3,671 16 8		£3,671 16 8

Museum.

	£ s. d.		£ s. d.
Rent—			
Museum Reserve	400 0 0	Water, fuel, and light	18 17 0
Educational Board	0 5 0	General expenses	30 5 3
Transferred from General Account	189 14 6	Curator	250 0 0
		Attendants	263 0 0
		Repairs	2 14 3
		Insurance	7 6 0
		Printing and stationery	2 15 0
		Apparatus and material	5 2 0
		Purchase of iron annexe	10 0 0
	£589 19 6		£589 19 6

University of Otago Endowment Fund.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	2,224 4 0	Balance, 31st March, 1908—	
Collected by Registrar	4 4 0	Debentures	2,200 0 0
		General Account	28 8 0
	£2,228 8 0		£2,228 8 0

Dental School Building Account.

	£ s. d.		£ s. d.
Government grant	1,000 0 0	Balance	10 10 0
Balance	433 7 11	Expenditure as per progress-payments	1,422 17 11
	£1,433 7 11		£1,433 7 11

Wolf Harris Endowment Fund.

Receipts.	£ s. d.	*Expenditure.*	£ s. d.
Balance, 31st March, 1907	2,100 0 0	Transferred to Medical School Account ..	94 0 0
Interest	94 0 0	Balance, 31st March, 1908	2,100 0 0
	£2,194 0 0		£2,194 0 0

Richardson Scholarship Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	870 17 5	Refund brokerage to General Account ..	3 17 0
Interest	33 0 6	Proportion of bank charge	0 2 7
		Debentures	823 2 3
		Current account, Bank of New Zealand, 31st March, 1908	76 16 1
	£903 17 11		£903 17 11

Sir Walter Scott Scholarship Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	329 10 8	Holder	10 0 0
Interest	12 3 7	Refund brokerage to General Account ..	1 8 6
		Proportion of bank charge	0 1 0
		Debenture	303 9 11
		Current account, Bank of New Zealand, 31st March, 1908	26 14 10
	£341 14 3		£341 14 3

Taieri Scholarship Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	353 10 4	Proportion of brokerage refunded to General Account	1 6 9
Interest	12 16 5	Proportion of bank charge	0 1 0
		Debentures	316 7 8
		Current account, Bank of New Zealand, 31st March, 1908	48 11 4
	£366 6 9		£366 6 9

Sir George Grey Scholarship Account.

	£ s. d.		£ s. d.
Government grant	50 0 0	Holder	50 0 0

Women's Scholarship Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	643 7 11	Holder	15 0 0
Interest	24 3 10	Proportion of brokerage refunded to General Account	2 15 6
		Proportion of bank charge	0 1 10
		Debenture	601 19 5
		Current account, Bank of New Zealand, 31st March, 1908	47 15 0
	£667 11 9		£667 11 9

Macandrew Scholarship Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	924 1 9	Proportion of brokerage refunded to General Account	3 12 3
Interest	32 19 0	Proportion of bank charge	0 2 6
		Debentures	793 19 1
		Current account, Bank of New Zealand, 31st March, 1908	159 6 11
	£957 0 9		£957 0 9

Macgregor Prize Fund Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	131 9 7	Holder	4 0 0
Interest	5 1 10	Refund brokerage to General Account ..	0 10 0
		Proportion bank charge	0 0 5
		Debentures	124 19 4
		Current account, Bank of New Zealand, 31st March, 1908	7 1 8
	£136 11 5		£136 11 5

Stuart Prize Fund Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	106 18 8	Holder	3 0 0
Interest	4 9 6	Proportion of bank charge	0 0 3
		Debenture	100 0 0
		Current account, Bank of New Zealand, 31st March, 1908	8 7 11
	£111 8 2		£111 8 2

Ulrich Prize Fund Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	72 13 10	Proportion of bank charge	0 0 3
Interest	2 11 11	Debenture	65 0 0
Transferred from General Account (part of £15)	1 6 1	Current account, Bank of New Zealand, 31st March, 1908	11 11 7
	£76 11 10		£76 11 10

Parker Memorial Prize Fund Account.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	50 0 0	Holder	2 0 0
Interest	1 19 7	Proportion of bank charge	0 0 2
Balance on 31st March, 1908	0 0 7	Debenture, 31st March, 1908	50 0 0
	£52 0 2		£52 0 2

Interest Account.—No. 3 Loan: Building Purposes, £11,000; Reclaiming Purposes, £1,000.

	£ s. d.		£ s. d.
From General Account	495 0 0	Interest paid on loan at 4½ per cent. ..	495 0 0

Debenture Account under "Dunedin Savings-bank Profits Act, 1878," and Amending Act, 1902.

	£ s. d.		£ s. d.
Balance, 31st March, 1907	6,500 0 0	Balance, 31st March, 1908, debentures ..	6,500 0 0

Land-sales Investment Account.

	£ s. d.		£ s. d.
Balance 31st March, 1907	3,521 2 4	Balance, 31st March, 1908, debentures ..	3,521 2 4
Addition resulting from Mr. Statham's investigation	280 12 5	Debentures, part £289 9s.	280 12 5
	£3,801 14 9		£3,801 14 9

Statement of Balances.

	£ s. d.			£ s. d.
General Account	483 4 3	Balance in Bank—		
Scholarship Prize Fund—		General Account ..	£1,236 14 9	
Richardson Scholarship Account ..	899 18 4	Less outstanding cheques	711 10 8	
Sir Walter Scott Scholarship Account ..	330 4 9			525 4 1
Taieri Scholarship Account	364 19 0	Scholarship Account		363 16 4
Women's Scholarship Account ..	649 14 5	Debentures ..	£17,800 0 0	
Macandrew Scholarship Account ..	953 6 0	Less difference 3 Debentures at £96 .. £288 0 0		
Macgregor Prize Fund Account ..	132 1 0	Brokerage .. 1 9 0		
Stuart Prize Fund Account	108 7 11		289 9 0	10 11 0
Ulrich Prize Fund Account	76 11 7			17,789 9 0
Parker Memorial Fund Account ..	50 0 0			18,678 9 5
University of Otago Endowment Account..	2,228 8 0			
Wolf Harris Endowment Account ..	2,100 0 0			
Dunedin Savings-bank Debenture Account	6,500 0 0			
Land-sales Investment Account ..	3,801 14 9			
	18,678 10 0	Less Debit Dental School Buildings ..	£396 1 1	
Debit—Dental School Building Account £433 7 11		Outstanding cheques ..	37 6 10	
Parker Memorial Fund .. 0 0 7				433 7 11
	433 8 6			
	£18,245 1 6			£18,245 1 6

INVESTMENTS, DEBENTURES.

	£	s.	d.		£	s.	d.	£	s.	d.
General Account	9,400	0	0	Dunedin Stock Exchange, 4 per cent.	1,800	0	0			
				New Zealand Government, 4 per cent.	6,500	0	0			
				Dunedin C. and S. Tramways, 4 per cent. ..	400	0	0			
				Borough of Mornington, 4½ per cent.	700	0	0			
				(Interest earned for year, £382 19s. 3d.)				9,400	0	0
Wolf Harris Endowment Fund ..	2,100	0	0	Dunedin C. and S. Tramways, 4½ per cent. ..	2,000	0	0			
				New Zealand Government, 4 per cent.	100	0	0			
				(Interest earned, £94.)				2,100	0	0
University of Otago Endowment Fund ..	2,200	0	0	New Zealand Government Land for Settlement, 4 per cent.	2,200	0	0			
				(Interest earned, £88.)				2,200	0	0
Scholarship and Prize Fund	3,200	0	0	Borough of Mornington, 4 per cent.	300	0	0			
				Dunedin Stock Exchange, 4 per cent.	2,700	0	0			
				Dunedin C. and S. Tramways, 4 per cent. ..	100	0	0			
				Ditto, 4½ per cent. ..	100	0	0			
				(Interest earned, £118 7s. 11d.)				3,200	0	0
General Account No. 2	600	0	0	New Zealand Government, 4 per cent.	600	0	0			
				(Interest earned, £24.)				600	0	0
	£	s.	d.							
General Account No. 3	300	0	0	Dunedin C. and S. Tramways, 4 per cent, at 96 ..	£288	0	0			
	289	9	0	Brokerage ..	1	9	0			
					289	9	0	300	0	0
								289	9	0
	£17,789	9	0					£17,789	9	0

W. A. MASON, Registrar.

Examined and found correct—J. K. WARBURTON, Controller and Auditor-General.

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