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candidates would do well to refrain from regarding themselves quite so prominently as students of mankind at large." Honest criticism of this kind (though not specially applicable to this State at present) should be welcomed and assimilated by young men who aspire to a course at Oxford under the Rhodes Trust. The founder of that endowment undoubtedly intended that his bounty should assist men of strong character and steadfast purpose, not that it should be bestowed upon those who develop "slackness" so soon as the coveted scholarship has been won.

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MUSIC TEACHERS' ASSOCIATION.

LECTURE BY PROFESSOR KERR GRANT.

The thirty-third general meeting of the South Australia Music Teachers' Association was held in the Prince of Wales Theatre of the University on Saturday evening. Dr. Harold Davies presided over a good attendance. Five new members were elected, and several nominations received. It was announced that the July meeting would be devoted to open discussion of matters of general interest, including "minimum fees for teaching." The articles and rules of the association would be subjected to thorough revision, one result of which would be that membership would become more exclusive. At the conclusion of the formal business Acting Professor Kerr Grant delivered a lecture on "Modes of production of musical sounds." He remarked that science and art were sometimes considered to be antagonistic, but this was not so; they stood not face to face, but advanced hand in hand. Each owed much to the other, and one method by which science could in part repay the immense debt which it owed to art was by providing new materials and new tools for the artist. It was possible that in some of the recently discovered methods of production of musical sounds to be shown that evening musicians of the future might find means to accomplish still greater effects than had hitherto been possible. The professor briefly explained the physical nature of sound and its mode of transmission, and showed that the difference between musical and unmusical sounds consisted in the rhythmic character of the impulses which produced the former. Such rhythmic impulses were producible by purely mechanical means. For example, the shrill scream of a circular saw, or the soft hum of an insect's wings; but the vast majority of sounds, and especially of those employed in music, owed their origin to elastic vibrations. The characteristics and laws of vibratory motion were next explained and illustrated by reference to the pendulum, both simple and compound, and the physical bases of the pitch, loudness, and quality of musical sounds were assigned to the rapidity, amplitude, and complexity of the vibrations which produced them. The different types of elastic vibrators—strings, rods, air columns, and plates—were exhibited and explained. Several experiments illustrating the effect of heat in maintaining the vibration of air in pipes were shown. A "sensitive flame" shrieked at the word of command, and was so "put out" at the laughter of the audience as to be extinguished. The lecturer demonstrated that a stream of water issues from a fine nozzle not uniformly, but in a regular series of spurts, and could be utilized to produce a musical note, and also to cause intense magnification of any sound communicated to the nozzle. Closely allied to this mode of sound production was the curious method shown in the flow of coarse-grained sand out of a long vertical tube. "Musical sounds," which utter a deep note when disturbed, were known in various parts of the world, and the shrill squeak of dry snow when trodden upon was probably an allied phenomenon. An exhibition of the "singing arc," discovered by the English physicist Duddell and applied recently by a Danish engineer named Poulsen to the production of electrical waves for wireless telegraphy, concluded the long list of most interesting experiments. On the motion of the Secretary (Mr. Ernest E. Mitchell) the professor was heartily thanked for his lucid and delightful lecture.

FROM CALIFORNIA.

A SUCCESSFUL ADELAIDE STUDENT.

A CHAT WITH PROFESSOR ROBERTSON.

Professor T. B. Robertson, a lecturer on physiological chemistry and pharmacology at the University of California, Berkeley, San Francisco, is visiting Adelaide, after an absence of about five years. Although born in Scotland, he lived in South Australia so long prior to his departure for America that he regards himself as belonging to this State. As a result of study here, Professor Robertson, who is still a comparatively young man, graduated in science at the University of Adelaide, and since proceeding to America has gained the additional degrees of Ph.D. (California) and D.Sc. (Adelaide). He will leave on his return to the United States at the beginning of next month.

—Botanists from America—

In coming to South Australia the professor was accompanied by Messrs. J. W. Scott (of New York) and W. Eastlake (of Toronto), the former of whom has undertaken to make a collection of Australian botanical specimens for the American Museum of Natural History in New York. Mr. Eastlake will assist him in the work, and Professor Robertson will prepare a plan of campaign for the two. He has already given Mr. Scott a start on several short expeditions within easy distance of Adelaide, and later the collectors will go ahead with a definite and comprehensive scheme. They will probably be in the Commonwealth for a year or more, and while in South Australia will travel a considerable distance toward the interior, without, however, there being any need for them to get much beyond the railway and coach routes. American botanical collections are said to have but poor representation, so far as Australian specimens are concerned, and the present move in the direction of enriching them will no doubt make an important difference. The professor states that there is indeed a splendid field to engage the attention of the collectors in the more settled, as well as the remote, parts of the country.

—Technical Education—

Professor Robertson informed a representative of The Register on Thursday that the University of California is maintained by the State from a special tax of three cents in the hundred dollars of property, levied all over the State. From that source the income is about 600,000 dollars (about £120,000) a year, and, in addition private endowments and revenue from property directly belonging to the University bring in about 400,000 dollars, so that the total income is about a million dollars (about £200,000) a year. There are about 4,500 students and 300 members of the faculty. The major portion of the instruction given is technical in character, and it was his impression that the tendency of State Universities in America was to over-emphasize the technical side. If, he remarked, they were to call the technical portion of the University a technical school frankly, and maintain the University separately, the immense development of technical education would be altogether admirable; but the effect of controlling the two branches within the one institution was rather to make the purely scientific or purely academic side of the instruction suffer, or give way to the technical at every point. In order to maintain the soundest educational standard and the intellectual development of the people, both sides ought to be fostered equally. He considered the method which the University of Adelaide had adopted on a smaller scale was altogether an improvement upon the American system, as the technical school (School of Mines and Industries) worked in co-operation with the University, but was kept a separate institution, with its students still able to avail themselves of the University course if they wished, while the University students need not necessarily accept the purely technical subjects when they desired to receive the wider and more general instruction which would be given in an essentially scientific class at a University.

—University Spending Dollars—

The largest colleges at the University of California, explained the professor, are those of mining, electrical engineering, agriculture, medicine, law, and civil engineering. The institution is situated in its own park, of about 100 acres, so that it has plenty of room for expansion. Recently a million dollars (about £200,000) a year have been spent on new buildings. The University celebrated its fiftieth anniversary not long ago. Commenting upon the fact that the University of Adelaide is cramped for space in which to extend its operations, Professor Robertson remarked that if such a difficulty arose in America the idea adopted for solution would in all likelihood be to move the institution right out into the suburbs, where there was an abundance of room. Before planting a University so close to the centre of a city, he thought the Americans would look ahead, so as to avoid the time when it would be hemmed in with other buildings, and when the value of property would become so enhanced that a further acquisition of land would be almost out of the question.

—"Almost Outside the World."—

Questioned regarding his impressions of the usual American outlook upon the Commonwealth, Professor Robertson said so far as the generality of United States people were concerned the answer could best be summed up in the two words "uninformed" and "indifferent." They have plenty to occupy them in their own affairs, and from their point of view Australia is almost "outside the world."

The professor is the guest of Mr. W. Culross, at Unley Park.

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THE EXTENSION OF UNIVERSITY WORK.

The formation of the new University centre at Yankalilla brings the total of such branches of the institution to 32. In other words, promising students in 32 parts of the State far removed, in some cases, from the University itself, have the privilege of presenting themselves in their own neighborhood for the public examinations, thus obviating the necessity which used to exist of visiting the city and attending at the University for the purpose. In effect the great seat of learning is taken to the doors of the country boys and girls residing within the areas of the different centres, and the advantage of such a course is obvious. Many country children have by this means been induced to continue their studies to an extent which was not possible in the cases of most of them before the "centre" system was brought into operation, because the expense of coming to the city was too great. Now, the brilliant boys and girls in the districts affected are able to make the first step to University distinction by passing the earlier examinations locally, and by a gradual process the system is being extended to all quarters of the State. The creation of centres carries another advantage to the districts, because the grouping of towns has enabled the University authorities to bring most of the centres within the scope of the extension lectures arrangement, so that in that respect the country has been nearly as well off as the metropolitan district. The remarkable success of the lectures scheme in the provincial districts has imposed a lot of extra work on the professors, and it stands to their credit that they have willingly given up considerable portions of their vacations for the purpose. The enthusiasm of the lecturers has produced an enthusiasm among country audiences which has been encouraging in every way.