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University and special examinations, and holds a first-class certificate under the Education Department. He has served as treasurer and corresponding secretary of the union. Mr. Nicolle has also served a term as President of the South Australian Public Teachers' Union.

R. WILLIAMS.
Born on December 8, 1881, Mr. James H. Williams entered the Education Department as a pupil teacher on January 1, 1888. He subsequently became assistant teacher at the Flinders Street School, and later served in a similar capacity at the Moonta Mines, Sturt Street, and Nailsworth Schools. In January, 1910, he was promoted to chief assistant teacher, and was appointed to the Gilles Street School. Later he served as chief assistant at Sturt Street. In 1918 Mr. Williams was made assistant master of the teachers' college, and was subsequently given a lectureship, which he held until the time of his promotion.

Registers
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FLINDERS CHASE.

Inspection by Board.

A party, comprising three members of the Fauna and Flora Board (Professor F. Wood Jones, Professor T. G. B. Osborn, and Mr. J. C. Marshall) recently inspected Flinders Chase, Kangaroo Island. They were accompanied by Mr. Edgar E. Waite (Director of the Adelaide Museum), whose desire was to examine the fish, and make collections in behalf of the Museum. An official report states—The party reached Rocky River on Monday, November 25, and stayed there until Friday, November 30. The work accomplished on the visit might be classified under three headings, namely, inspection of improvements made by the ranger in the last 12 months, plan for future improvements, and the collection of material of the fauna and flora for a scientific investigation of the resources of the chase.

Improvements.

In regard to improvements at the Chase it was reported that both house at Rocky River are now in a good state of repair, as is also the mailman's hut. The second house has been provided with stretchers, and so on, and is to serve as a rest home for authorized persons visiting the chase. The two new 800 gallon galvanized iron rain water tanks have been connected to the ranger's house and the large underground tank beside the rest house which was cracked had been repaired. The fences around the gardens and small paddocks have all been repaired, and the wild pigs continue to do damage and break them down in places. The scrub along some miles of road has been cut. Bridges have been repaired where practicable.

Several breaks have been burnt around selected areas. The pasture has been improved by burning shoots or scrub over portions of the derelict pasture. While every effort will be made to conserve most of the natural flora and allow it to revert to its one-time density, it is considered essential to regularly clear by burning portions in order to provide feed for the large numbers of native animals on the reserve. The ranger (Mr. G. J. May) has undertaken most of the work unaided, and much credit is due to him for the work done in the face of considerable difficulties, and even hardships.

Further Developments.

Reporting as to further developments, the board state that they have selected a site of 14 acres, partly of scrub and partly of cleared pasture, to be enclosed by a netting fence. In this area a few wallabies and kangaroos will be placed. This is to provide a stock of partially tamed animals from which specimens can be taken at any time for exchange or sale. It will also prove of interest to visitors to see the fauna close at hand. A smaller enclosure is to be made for the mallee fowl presented by Mr. F. H. Downer. Road clearing and bridge-building was approved to open up portions of the chase. Steps will be taken to define the boundaries of the place, and to proceed with the erection of the boundary fence. From 50 to 100 square miles of country was swept by a disastrous fire last April. It is intended to clear breaks in the burnt scrub and improve the Cape Bore road, which traverses the burnt area. The board visited the mouth of Rocky River. Break-

neck Creek, via the Border Road, and Cape du Couedic. The lack of proper roads and tracks makes travelling difficult. The density of some of the mallee and of the scrub under the big timber is extraordinarily great. There is ample cover for the animals in the reserve, but judicious burning is essential in order to provide feed. The board is well satisfied as to the abundance of animals.

Scientific Work.

In regard to scientific work, the policy of the board is that it is impossible to provide adequate protection for the fauna and flora until it is known what animals and plants are already there to protect. The indiscriminate introduction of animals, birds, fishes, or even plants until it is known that they would thrive is a waste of time and money. Conversely, it must be ascertained that their presence would not be prejudicial to the existing fauna and flora. Six koalas (native bears) obtained in exchange from the National Park, Victoria, have been liberated. A pair of Cape Barren geese, presented by Mr. J. C. Marshall, have been set loose, after pinioning, upon the swamp at Rocky River. Mallee owl will be sent as soon as suitable accommodation has been provided. But it is not intended to carry out introductions in a haphazard manner. A complete survey of the animal and plant life is now being made. On the board's recent visit evidence of the existence of the native cat (*dasyurus*) was obtained. This animal, once so common in the Adelaide district, is now almost, if not quite, extinct, and no authentic specimens are available. Bandicoots are known to exist on the reserve, and also the dormouse opossum. Twelve species of reptiles and amphibians were collected, and also 126 species of insects, of which at least four are new to science, and several are very rare. Of the flora 230 species of flowering plants were collected. A complete census of the fauna and flora is now in preparation, and this will take the form of a card index of all authentic records of plants and animals collected or observed. A card index of photographs taken is also being made. These records will be available to students as well as to members of the Nature-loving public who may be unable to visit the reserve.

The Advertiser

ADELAIDE: THURSDAY,
DECEMBER 13, 1923.

THE BEGINNINGS OF LIFE.

Commemoration Day was observed at the University of Adelaide yesterday with the ceremonies customarily associated with that academic celebration. As usual, an important feature of the proceedings consisted in the delivery of an address by one of the professors dealing with a subject on which he could claim a special right to be heard; and certainly no one would dispute this claim in the case of the paper read by Professor F. Wood Jones, who was world-famous as an expounder of anatomical science in Great Britain years before its students at the Adelaide University had the honor of his services as their teacher. Parts of the ground which he covered have no doubt been trodden by many feet, but it will be surprising if the medical profession not only in Australia, but in older communities, do not find something new and noteworthy in the main portions of his address. And though parts, again, may be caviare to the general, popular attention has been directed sufficiently to the subject for some years past, and the language he employs where possible is (no doubt intentionally) so lucid that Professor Wood Jones may be assured of an interested audience by no means small among the lay public.

For every educated and intelligent person ought at this late date to know something about the constitution of the cell, the fundamental unit in every animated creature. The discovery of the cell was one of the most brilliant triumphs of last century, and went far to revolutionise not only the science of anatomy, but of human thought in other directions. Incidentally, for example, it gave the death-blow to the theory once universally en-

certained that the body is the general abode of a "vital principle." The lay mind, no less than the learned, is now aware that in the cell, or rather in its nucleus, the secret of all life, both animal and plant, resides. Every cell has a complete life history of its own. It grows in size, maintains itself in a state of activity, responds to stimuli, reproduces its kind, and in course of time degenerates and dies. All this, and the new turn to enquiry given by the cellular theory, might seem a matter that rather concerned the biologist and pathologist than the anatomist whose functions Professor Wood Jones was specially considering, but those functions, as he reminds us, on the authority of his great forerunner, John Hunter, have come to be recognised as extending beyond structure. "We must remember that the knowledge of the details of the structure of the cadaver is only a very small part of the science of anatomy; and that our students will one day need to readjust their ideas since they will deal with the living." And dealing with the living, those students will have to familiarise themselves with, among other products of recent researches, those mysterious entities known as "hormones," the "structural complexes resulting from the action of the secretions of certain ductless or endocrine glands," of which so much is just now heard, especially in connection with the rejuvenation of the aged and the cure of many diseases. Again, the anatomist of the future will need to familiarise himself with that far greater wonder, the conception of "Neurobiotaxis"—the appropriate reaction of an animal to a sensory stimulus, as the sightless, senseless newborn pup instinctively grasps the nipple of the mother when held close enough. Here, indeed, we touch mystery, if possible transcending the old idea of the influence of "vital spirit" in living organisms, for we have to assume the operation of laws laid down in the central nervous system of the pup even before its birth. But Professor Wood Jones carries us further, for the peculiar attraction or "call" of cell to cell is a phenomenon, he declares, not peculiar to the central nervous system, but underlies all the processes and organs of the body. This "strange force," as he calls it, affecting the organs of sight and smell, hearing, touch, taste, and the alimentary and other systems, he has, at the suggestion of Professor Darnley Naylor, designated Cytoclesis as expressing in a single word the mysterious process whereby cells more or less remote from one another respond to "calls" to co-operate in the production of some organ or apparatus.

We have thus a picture of myriads of cells marching in obedience to some mysterious order or instinct to their appointed places, till by their united exertions we have the finished body. But "Cytoclesis" may exert a maleficent as well as a beneficial influence. The marching cells in responding to "calls" may find their way into the wrong territory, and often their behavior is so problematical as to convey a strange suggestion of sheer malignancy. It is as though the forbidden country was like Belgium in 1914, invaded deliberately, unless, indeed, the invaders blundered in through a misunderstanding of normal calls or in obedience to perverted ones. Professor Wood Jones admits that he may here be trespassing on the realm of the pathologist, but so brilliant an explorer in a realm whose exploration is vital to the welfare of mankind will not be held to too strict an account. There are fields of research where diligence and accuracy are the only qualifications expected or desired, as, for example, that of the historian. But the realm of science, as Tyndall tells us in one of the most memorable of his addresses, provides scope for the imagination also. When a poet of the highest order—Johann Goethe—discovered that organs so dissimilar in function and appearance as the calyx, corolla, and other parts of a flower, were nothing but metamorphosed leaves, he was simply turning his imaginative, otherwise poetic, faculty into special use in the service of science. Whether or not Cytoclesis provides or will ever provide the key to morbid growths, the claim must be admitted that it has given a new significance to the science of anatomy and gone far to obliterate whatever line of demarcation separated it from the healing art.

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THE UNIVERSITY AND URRBRAE.

AGRICULTURAL RESEARCH INSTITUTE.

PROFESSOR OF AGRICULTURE PROPOSED.

The University of Adelaide is giving careful consideration to the question of applying the benefactions of Mr. Peter Waite etc to the purpose for which they were intended.

At the University commemoration yesterday the Chancellor (Sir George Murray) said possession of the Urrbrae estate had passed to the University during the early part of the year. At the same time many valuable gifts of furniture and plant were received from the family of Mr. Waite. The best mode of applying his benefactions to the purposes for which they were presented had engaged the earnest attention of the council. It would be recognised that unless they were to found upon the proper plan with the best advice obtainable they might proceed on wrong lines and waste time and money. They were waiting now for further information from abroad. A careful calculation of the University's means and the probable expenditure made it clear that notwithstanding the splendid endowment of nearly £60,000, that Mr. Waite himself provided, they would not have nearly enough to realise their object. The Premier had been visited on and after consultation with Cabinet had agreed to the suggestion of the council that the Government should give a subsidy of 5 per cent. on endowments up to £20,000 per annum, instead of, as in the past, limiting the amount to £10,000, which limit already had been almost reached. The University gratefully acknowledged the generosity of Parliament in passing the Act. As soon as the council's enquiries were completed, they would be in a position to go ahead.

The scheme was to establish in the first instance a research department to be called the Waite Agricultural Research Institute, under the directorship of a professor of agriculture, where the problems and difficulties that from time to time confronted the rural occupier would receive expert investigation. The training of students would be a secondary consideration for some time. They had already appointed, in Mr. Geoffrey Samuel, a plant pathologist, whose special work was the study of the diseases of plants, but before they could make much further progress they must have a professor of agriculture, for it was upon him that they must mainly rely for guidance in laying the foundations truly and well. Mr. Samuel had recently returned from a journey abroad in search of information and experience and would undoubtedly show that the council had done well in appointing him.

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THE UNIVERSITY REGISTRAR.

MR. HODGE RETIRES.

"ABLE, TRUSTWORTHY, AND LOYAL."

In his address at the University Commemoration yesterday, the Chancellor (Sir George Murray) mentioned with extreme regret that the Registrar (Mr. C. R. Hodge), who had devoted so much of his strength and energy to the University for nearly 40 years, was unable to bear the burden any longer and would retire at the end of February. Mr. Hodge was not the oldest servant of the University—Mr. Fuller came in 1881 at the same year as he (the Chancellor) entered as a student—but he was next in seniority. He spoke of Mr. Hodge as he had found him when he said he had been an able, trustworthy, and loyal officer. He had never