

research on the production of soft food crops—a species of market-gardening which has been much neglected in the Gold Coast. In addition, a course of one year's duration is given to train instructors of mechanized agriculture.

A further department, in some respects foreign to the ultimate purpose of the College, is called the Department of Intermediate Studies. This Department was organized initially, at the request of the Government, to fill the gap left by the absence of a sixth form in a number of secondary schools. The students in the Department read for Higher School Certificate, both in arts and science; and the majority of them apply for entrance to the University College. The Department fulfils, however, the further function of providing basic science for students of pharmacy, engineering and agriculture.

All students in the College at present spend some of their time in studying English, and a large proportion take mathematics. A Department of Mathematics and an organization under a senior lecturer in English have therefore been set up. Students, teaching staff and many of the administrative staff are resident on the compound. It follows that when the student population exceeds a thousand, with perhaps a hundred teaching staff and a large population of administrative and estate employees, the College will amount to a small town, with its own services, electricity, water, gas, its own roads and transport system. Already the pre-occupations of the administration tend to resemble those of a small town council.

Continued progress at the present rate is unlikely, but may still be rapid. It is a question whether funds from the Gold Coast Government will be forthcoming in satisfactory amount for a sufficient length of time. The shortcomings of the Ordinance, which appears to have been modelled on that of Achimota School, are beginning to be felt. Autonomy, which is incorporated in the Ordinance, tends to be nullified by the close dependence on funds provided by the Government, and the absence, as yet, of a quinquennial or triennial grant. Nevertheless, the essentials of a great College already exist, with far-reaching effects on the prospects for successful self-government in the Gold Coast.

## OBITUARIES

### Dr. Colin Campbell

DR. COLIN CAMPBELL, dean of the Faculty of Science and assistant director of the Chemical Laboratories in the University of Manchester, died at his home on August 23. He entered the University, in which he spent his whole career, from William Hulme's Grammar School, Manchester, in 1906 and, after graduating with first-class honours in chemistry, was appointed Schunck research assistant to Prof. H. B. Dixon, with whom he published accounts of investigations on the velocities of explosions in gases, and on the velocity of sound in, and the specific heats of, gases at high temperatures.

During the First World War, Campbell was a member of Dixon's team of inspectors of explosives under the Ministry of Munitions. Afterwards, with a succession of collaborators, using mainly photographic methods, he continued to study the velocities of gaseous explosions with particular reference to the changes arising as explosions pass from one tube to

another of different diameter or through successive tubes of glass and rubber, to the influence of dilution by inert gases and also to the initiation of explosion in one gaseous mixture by an explosive wave from another. Many of these investigations involved ingenious developments of technique, as did his work on the determination of pressures developed in the combustion of gaseous mixtures; but perhaps the most elegant experimental work followed the observation, with D. W. Woodhead, of striations in the photographic records of explosion waves in carbon monoxide-oxygen mixtures (1926). Campbell and Woodhead carefully investigated this phenomenon, and Campbell and A. C. Finch, two years later, established that it is accounted for by the helical path followed by these explosions in a tube.

Dr. Campbell became a member of the staff of the Chemistry Department in the University of Manchester in 1914 and senior lecturer in 1925. He played an important part in the teaching in the Chemistry Department, and his experimental lectures, characteristic of his personal qualities, were models of lucidity and precision. He was in continual demand as a lecturer to more general audiences outside the University. Many generations of students quickly came to value his skilful and patient teaching in the first-year laboratory.

As assistant director of the Chemical Laboratories from 1935 his activities embraced a much wider field. His influence in maintaining a unified department, through a period of considerable change, cannot be over-estimated. He was the faithful guardian of a great departmental tradition. Eminently approachable, his friendly manner and spontaneous interest gained him the confidence of both colleagues and students, with whom he established close personal contacts. He was usually the first to learn of a student's personal problems, and those in difficulty, including disappointed examinees, were always certain to receive sympathy and encouragement to further effort. The meeting of the University Chemical Society last year, at which he gave his presidential address reviewing the history of the Department, was a memorable occasion. He was an influential member of the Board of the Faculty of Science for many years and was appointed dean in 1952.

Manchester's religious life will be greatly impoverished by his death. He gave a life-time of devotion to the Congregational Church in the area, to the Manchester and Salford Shaftesbury Society and particularly to his own Cavendish Congregational Chapel, of which he was secretary, Sunday school superintendent and often organist.

Colin Campbell will be sadly missed in his University and in many walks of life outside its walls; but he leaves behind indelible and happy memories of his deep and sincere Christianity, strong human sympathy, warm friendliness, modesty and wise patience. It is as an unfailing friend that so many will continue to think of him.

E. R. H. JONES  
G. NORMAN BURKhardt

WE regret to announce the following deaths:

Prof. A. F. Holleman, formerly professor of chemistry in the Universities of Groningen and Amsterdam, on August 11, aged ninety-three.

Dr. E. P. Hubble, of Mount Wilson Observatory, associate of the Royal Astronomical Society, on September 28, aged sixty-three.