

terminating in the tenth and eleventh thoracic segments. Its function is still undetermined, a series of detailed experiments showing only that it is not concerned with the pyramidal or voluntary motor path, or with any obvious vasomotor process of the spleen, kidney, and other organs, as examined with the plethysmograph.

Dr. Page May also demonstrated, by the method of retrograde chromatolysis, the delimitation of the motor area in the cerebral cortex. The method is free from the fallacies that attend stimulation and ablation, and has enabled the author and Dr. Gordon Holmes to map out the cerebral motor area with great precision. This area in man and the higher mammals is definitely precentral, as Sherrington and Grünbaum have found by other methods.

Dr. Sutherland Simpson and his pupils described the pyramidal tract in the sheep and guinea-pig. The fibres were traced by the degeneration method after removal of the motor cortex of one side, the staining being carried out with Marchi's method. In the sheep it was found that no pyramid fibres could be found in the posterior columns, the proportion of direct fibres was large as compared with the crossed fibres, and the fibres could not be traced at all below the first cervical segment.

Prof. Simpson also communicated a paper by Mr. E. C. Peterson on the ascending tracts in the spinal cord of the cat.

The report of the committee on the ductless glands, drawn up by Prof. Swale Vincent, furnished an interesting group of papers by Mrs. W. H. Thompson (of Winnipeg), Drs. Halpenny and Brandson, and Dr. Young.

Mrs. Thompson (who illustrated her paper with a series of excellent diagrams), as a result of the study of the thyroids and parathyroids throughout a wide range of the animal kingdom, supported the views of Vincent and Jolly, and Forsyth, that these bodies are not separate and independent, but are very intimately related. Although distinct in the lower Vertebrata, and of somewhat different embryological origin, in the Mammalia they form, in fact, one apparatus.

Dr. Halpenny discussed the operation of parathyroidectomy, and also the effect on the parathyroids after excision of the thyroids.

Dr. Young investigated the effect of excluding the blood passing through the adrenals from the circulation; he found no fall of blood pressure even after several hours; there was, however, a distinct rise when the ligature was removed.

In presenting the report of the committee on Arum spadices, Dr. Waller referred to the result obtained by him of the effect of local heat on vegetable and animal tissues. "Thermic shocks," short of actual injury to the tissues, produce no excitation, in contradiction to the usual text-book statement, but give an electrical effect of opposite sign to that given by excitation.

Prof. E. J. McWeeney read a paper on the bacilli connected with food poisoning, for the details of which the report must be consulted.

The joint discussion with Section B, to which Dr. E. Frankland Armstrong, Dr. E. J. Russell, and Prof. J. Wilson communicated papers, proved one of the most successful features of the meeting, and it is to be hoped that the precedent thus set will be followed on future occasions. Dr. E. Frankland Armstrong directed attention to the difference in composition of different proteins, and pointed out that not only should the total nitrogen be taken into account in comparing the different foods, but due regard should also be paid to the composition and nature of the constituent units. Dr. E. J. Russell referred to the very great difference in food value between different samples of hay and roots, which showed but small variation with the usual methods of analysis. Prof. J. Wilson gave a most interesting historical account of the practice of farmers in feeding live-stock, particularly bullocks. He pointed out the great economic importance of the knowledge of the proper amount of the different proportions of the more expensive protein to the less expensive fat and carbohydrate, and showed how the practice of farmers had changed in this matter. Prof. H. E. Armstrong, Prof.

Cushny, Dr. Alcock, and Dr. Hardy also joined in the discussion.

On the last day of the meeting Dr. Alcock gave a demonstration of his chloroform apparatus in the theatre of the Winnipeg General Hospital, and subsequently there was a discussion on the structure and function of the nucleus, in which Prof. A. B. Macallum and Dr. W. A. Hardy took part.

#### UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—At a meeting of the master and fellows of St. Catharine's College, held on October 19, Prof. R. H. Biffen, of Emmanuel College, was elected to the vacant professorial fellowship. Prof. Biffen, who was a scholar of Emmanuel College, was placed in the first class in part i. of the natural sciences tripos in 1895, and in the first class in part ii. of the same tripos in the following year. Shortly after taking his degree he was elected to the Frank Smart studentship at Gonville and Caius College, and soon afterwards he undertook a research which greatly modified the process of the manufacture of india-rubber. Later, as professor of agricultural botany, he has done much to produce new wheats, some of them rust-resisting, others combining a high yield with the "strength" which bakers desire. This autumn, for the first time, the seeds of these wheats are being distributed to agriculturists. Prof. Biffen is also a well-known authority on fungoid diseases of plants.

Mr. V. H. Mottram, of Trinity College, has been appointed additional demonstrator of physiology until Michaelmas, 1912.

Mr. W. McD. Scott has been elected to a John Lucas Walker studentship, and Dr. C. W. Ponder, of Emmanuel College, has been elected to a second studentship.

The Arnold Gerstenberg studentship has been awarded to Mr. C. D. Broad, scholar of Trinity College.

MANCHESTER.—In response to the appeal made by Prof. Perkin at the opening of the new extension of the chemical laboratories on October 4, the following donations have been received towards the cost of the necessary apparatus, material, and equipment:—Dr. Hugo Müller, 300*l.*; anonymous, 250*l.*; Mr. Vernon K. Armitage, 250*l.*; Mr. M. J. Fernandez Ferreira, 50*l.*; Mr. Noah Kolp, 50*l.* The sum of 1100*l.* is still required.

Dr. C. P. Lopage has been appointed lecturer in observation of children and school hygiene.

OXFORD.—The geographical scholarship for 1909-10 has been awarded to Mr. H. Wallis, scholar of Hertford College.

MR. A. P. I. COTTERELL has been appointed lecturer on sanitary engineering in the faculty of engineering of the University of Bristol. The faculty is provided and maintained in the Merchant Venturers' Technical College.

DR. A. CAMPBELL GEDDES has been appointed successor to the late Prof. A. Fraser in the chair of anatomy at the Royal College of Surgeons in Ireland. Prof. Geddes was formerly assistant to the late Prof. D. J. Cunningham, F.R.S., Edinburgh.

To show his personal interest in the new Hong Kong University, the King has directed that holders of Government scholarships shall be styled "King Edward VII. scholars." Lord Crewe, the Secretary of State for the Colonies, suggests that the scholarships should be confined to Hong Kong Chinese and Chinese born in the Straits Settlements.

THE corporation of Yale University has received from Messrs. W. D. and H. T. Sloane, of New York, a gift of 425,000 dollars for the erection and equipment of a physics laboratory. Among other recent gifts are 25,000 dollars from Mr. A. G. Vanderbilt toward the general

endowment, and 15,000 dollars for the school of forestry from Mr. G. H. Myers, a graduate of that school.

THE Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield has appointed Mr. J. Murray Crofts, of Emmanuel College, Cambridge, as their organising secretary for the inspection and examination of schools. Mr. Crofts was for two years assistant master at Giggleswick, for two years junior inspector of the Board of Education, secondary branch, and for five years headmaster of the Johannesburg College, Transvaal, a post which he recently resigned.

WE learn from the *Scotsman* that during the recent recess many alterations and additions to the buildings in connection with the physiological department of the University of Edinburgh have been carried out, and that the additional accommodation will be available in the course of the present month. By utilising what was formerly the lecture-room, a new physiological chemical laboratory has been obtained, and the former chemistry room has been re-fitted as a laboratory for special research in chemical physiology. In addition to the foregoing, a new lecture-room has been erected on a piece of vacant ground at the south-west corner of the new buildings of the University. It is a one-storey building, designed to harmonise in appearance with the older adjacent buildings, and accommodates about 350 students.

THE *Electrician* for October 1 reprints in slightly abridged form from the *Electric Journal* an article by Mr. F. W. Taylor, an employer and past president of the American Society of Mechanical Engineers, on the reasons why manufacturers dislike college graduates. The difficulty in America appears to be that the graduate, on first entering works, becomes dissatisfied with the simplicity of the jobs allotted to him, and only after a year or two of shop experience develops character enough to do monotonous, unpleasant, or disagreeable work. Mr. Taylor suggests as remedy a year of hard work in the shops to follow immediately the first year of college life of all students, whether they are intended ultimately for the engineering profession or the Church. He believes they will in this way get a sounder knowledge of man and his duty in this world than can be gained by any other means. The *Electrician*, in a leading article devoted to the question raised by Mr. Taylor, cordially endorses many of the opinions he expresses.

PROF. W. OSLER, F.R.S., formally opened on October 15 three new laboratories for physiology, chemistry, and physics, respectively, at the London Hospital Medical College. The laboratories have been constructed and equipped at a cost of about 8000*l.*, and afford accommodation for some 120 students. In declaring the laboratories open, Prof. Osler said that, after all, laboratories are the foundation-stones on which the work of a hospital rests. Medical students cannot spend too long a time in them. Medical students ought to get their laboratory methods so thoroughly ingrained into their constitution that they carry them with them to their dying day. If they are to be good practitioners they have to carry their laboratory work with them into their practice. Prof. Osler said he would like every medical student in one or other of the laboratories to undertake during some portion of his career a small piece of research work. It is difficult, but it altogether depends upon the individual will of the individual man. All can do it if they only make up their minds to it, and in view of their large research endowment fund there is no reason why some of the money should not go to helping the research work of some of the younger men.

THE new University College of South Wales and Monmouthshire at Cardiff was opened on October 14 by Lord Plymouth, president of the college. The King, as Protector of the University of Wales, sent wishes for the success and prosperity of the future work of the college. The Prince of Wales, as Chancellor of the University, sent a letter to Lord Plymouth to be read at the ceremony. In

the letter the Prince said:—"The steady growth of the college and the record of work accomplished during the first twenty-five years of its life are evidence that it has adapted itself to the needs of the community. This development is particularly noticeable in the technological and medical schools, and, thanks to the generous support of the coalowners of South Wales to the former and the assistance specially given by the Treasury to the latter, still further vigour and usefulness may be looked for from these departments. To Principal Griffiths and the students past and present I offer my hearty congratulations upon the good results achieved by the college. Meanwhile, we must look ahead and endeavour to be ready to meet all the requirements of scientific and intellectual progress. The imperative necessity for higher education and research is becoming more and more recognised, and I feel sure it is not lost sight of by those who direct the great commercial industries of the district. The University College of South Wales is destined to provide the want, and I confidently believe that the people of South Wales, through whose patriotic generosity so much has already been accomplished, will by their continued sympathy and material support not only extinguish the debt upon the new buildings, but secure the funds necessary for still further developments."

THE trustees of the Oxford University Endowment Fund have completed the first year of their administration of the fund. The total sum received by the trustees was 86,570*l.*, the greater part of which was forwarded to them as the result of Lord Curzon's appeal for donations for the further endowment of Oxford University. Among grants made by the trustees the following may be mentioned. A grant of 500*l.* a year has been promised for eight years to the curators of the Bodleian Library. The trustees have also provided the funds required to convert the North Gallery into a new reading-room, and have undertaken to meet the cost of constructing an underground chamber for the storage of books belonging to the Bodleian Library. It is estimated that this chamber will cost 10,000*l.* Five hundred pounds have been offered to meet the cost of equipment for further accommodation if space can be found by the University for the expansion of the school of geography. The trustees have agreed to pay for three years the salary of the newly appointed lecturer in Japanese, so that the school of Japanese—the first to be established in any English university—may be initiated without more than nominal calls upon the funds of the University. A school of engineering has been provided, largely by gifts allocated by donors and passing through the hands of the trustees. From the sum thus provided the trustees have promised a payment of 600*l.* a year for five years as a contribution to the cost of the engineering school, and have paid 300*l.* for equipment. Out of the general income of the trust fund a further sum not exceeding 150*l.* per annum has been promised for three years to furnish accommodation for the professor, for whom at present there is no adequate laboratory available. The sum of 61,553*l.* has been invested. The income will enable the trustees to make annual grants in aid of studies at present endowed inadequately, or in the establishment and initiation of new studies.

## SOCIETIES AND ACADEMIES.

### MANCHESTER.

**Literary and Philosophical Society.** October 5.—Mr. Francis Jones, president, in the chair.—A new binary progression of the planetary distances, and on the mutability of the solar system: Dr. H. Wilde. In his table of planetary orbits the author has adopted the radius vector of Mercury as the unit to which the other planetary distances should be referred, the terrestrial unit being a survival of the geocentric system of the universe. The change in the unit of distance has revealed a new binary progression of the planetary distances nearer the observations than that of Bode's law.