

be much more liable to attack by any micro-organisms of the soil which succeeded in penetrating the seed-envelopes, if the protective sheath of living cells were not present. It is remarkable that the "aleurone-layer" is much more fully developed over those parts of the seed that may be regarded as dead, becoming very much more attenuated where in proximity to the embryo, the cells of which owing to their vitality do not require an equal amount of protection.

The authors express, finally, their great thanks to Mr. W. T. Thiselton-Dyer and to Dr. D. H. Scott for the opportunities afforded them in the prosecution of this research at the Jodrell Laboratory, Kew.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

MR. J. CROWTHER, at present lecturer in metallurgy in the Owens College, Manchester, has been appointed to a similar position in the Swansea Technical School.

DR. CHEADLE has presented the St. Mary's Hospital Medical School, Paddington, with the sum of 500*l.*, to found a gold medal in clinical medicine.

DR. WALLACE WALKER has been appointed to the additional chair of Chemistry recently founded and endowed by Mr. W. C. McDonald in McGill University, Montreal; and Mr. Ernest Rutherford has been appointed to succeed Prof. H. Callendar in the chair of Physics.

THE following appointments have been made at the West Ham Municipal Technical Institute:—Lecturer in physics and mathematics, Mr. S. G. Starling, of the Battersea Polytechnic; demonstrator in physics, Mr. J. Tomkin, of the Royal College of Science; demonstrator in chemistry, Mr. F. H. Streatfeild, of Finsbury Technical College.

THE *Record of Technical and Secondary Education* for July contains illustrated accounts of the Royal Technical Institute, Salford, and the Leith School of Navigation, and an important article on "Technical Institutions and Local Authorities in England," in which it is endeavoured to give trustworthy information as to the amount of money expended on technical buildings by local authorities. The article deals only with the work done in the county boroughs, but a subsequent contribution will deal with the operations in connection with County Councils and other local authorities.

HER Majesty's Commissioners for the Exhibition of 1851 have made the following appointments to Science Research Scholarships, for the year 1893, on the recommendation of the authorities of the respective Universities and Colleges. The scholarships are of the value of 150*l.* a year, and are ordinarily tenable for two years (subject to a satisfactory report at the end of the first year) in any University at home or abroad, or in some other institution approved of by the Commissioners. The scholars are to devote themselves exclusively to study and research in some branch of science, the extension of which is important to the industries of the country. A limited number of the scholarships are renewed for a third year where it appears that the renewal is likely to result directly in work of scientific importance.

	Nominating institution.	Scholar
1	University of Glasgow	James Francis Bottomley
2	University of Aberdeen	Alexander Findlay
3	Mason University College, Birmingham	A. H. Reginald Buller
4	Yorkshire College, Leeds	Harry Thornton Calvert
5	University College, Liverpool	Ernest Brown
6	University College, London	Louis Napoleon George Filon
7	Owens College, Manchester	James Henry Smith
8	Durham College of Science, Newcastle-upon-Tyne	Arthur William Ashton
9	University College, Nottingham	Austin Henry Peake
10	Royal College of Science for Ireland	Robert L. Wills
11	Queen's College, Galway	Hugh Ryan
12	University of Toronto	William Gabb Smeaton
13	Dalhousie University, Halifax, Nova Scotia	Ebenezer Henry Archibald

The following scholarships, granted in 1897, have been continued for a second year on receipt of a satisfactory report of work done during the first year:—

	Nominating institution	Scholar	Places of study
1	University of Edinburgh	Longfield Smith	University of Leipzig; to proceed to University of Heidelberg
2	University of Glasgow	James Muir	Engineering Laboratory, University of Cambridge
3	University of St. Andrews	Harry McDonald Kyle	Gatty Marine Laboratory, St. Andrews, and Laboratoire Arago, Banyuls-sur-mer; to proceed to Marine Laboratory, Heligoland
4	University College, Dundee	Sydney A. Kay	Högskola, Stockholm; to proceed to University of Leipzig
5	Mason College, Birmingham	Gilbert Arden Shakespear	Cavendish Laboratory, University of Cambridge
6	University College, Bristol	Chas. Henry G. Sprankling	Owens College
7	Yorkshire College, Leeds	Harold Albert Wilson	Cavendish Laboratory, University of Cambridge
8	University College, Liverpool	Wm. Augustus Caspari	University of Jena; to proceed to University of Leipzig
9	University College, London	Percy Williams	École de Pharmacie, Paris; to proceed to Prof. Van't Hoff's Laboratory, Wilmersdorf, Berlin
10	Owens College, Manchester	J. H. Grindley	Owens College (<i>permitted under special circumstances</i>)
11	Durham College of Science, Newcastle-upon-Tyne	Robert Raitlon Hallaway	Universities of Bonn and Heidelberg
12	University College of South Wales and Monmouthshire, Cardiff	Maria Dawson	Botanical Laboratories, University of Cambridge
13	Queen's College, Belfast	W. A. Osborne	University of Tübingen
14	McGill University, Montreal	Jas. Lester Willis Gill	First year, McGill College (<i>by special permission</i>); second year, Harvard University
15	Queen's University, Kingston, Ontario	Frederick J. Pope	Columbia University, New York
15	University of Sydney	Tom Percival Strickland	MacDonald Engineering Laboratories, McGill University
17	University of Melbourne	W. Rosenhain	Engineering Laboratory, University of Cambridge

NOTE.—The Report of the Scholar from University College, Nottingham, is not yet due.

The following scholarships, granted in 1896, have been exceptionally renewed for a third year:—

	Nominating institution	Scholar	Places of study
1	Mason College, Birmingham	Thomas Slater Price	University of Leipzig; to proceed to University of Stockholm
2	Yorkshire College, Leeds	Harry Medforth Dawson	Laboratory of Prof. Van't Hoff, Wilmersdorf, Berlin
3	University College, London	Joseph Ernest Petavel	Davy-Paraday Laboratory
4	University College, Nottingham	George Blackford Bryan	Cavendish Laboratory, Cambridge
5	Dalhousie University, Halifax, Nova Scotia	Douglas McIntosh	Cornell University; to proceed to University of Leipzig

THE Holt Fellowships in Physiology and Pathology established in connection with University College, Liverpool, by the late Mr. George Holt in 1886 for a period of ten years, and renewed for a further period by Mrs. and Miss Holt, have been awarded to the following gentlemen respectively: Mr. A. Hope Simpson, provisionally upon his attaining full qualifications within a period of three months, and Mr. K. Nelson. The Robert Gee Fellowship in Anatomy, of the value of 100*l.*, has been awarded to Mr. F. Lovegrove.