

Ordnance large-scale maps of Great Britain was brought to notice by Sir Charles Close, sheets in some cases being forty years out of date. Methods of map reproduction at home and in the tropics were discussed at the Ordnance Survey, Southampton, where Brigadier H. St. J. L. Winterbotham, the initiator and president of the Conference, and Major Clough, gave a description of the latest methods and processes of map-making. Triangulation was discussed by Dr. de Graaff Hunter and Capt. Calder Wood; traverses by Mr. J. Clendinning; gravimetry and the training of European surveyors were treated at Cambridge by Sir G. P. Lenox-Conyngham, Col. Craster, Prof. F. Debenham, and others; while Sir John Flett gave a remarkably lucid lecture on geophysical surveying, and Drs. Jeffreys and Hunter dealt with the relations between geophysics and geodesy. Air survey was brought forward by Capt. M. Hotine, air photography by Flight-Lieut. J. Bussey, aeronautical maps by Squadron Leader P. H. Mackworth, and air survey as applied to cadastral mapping in India by Col. R. H. Phillimore; a paper on the airman-surveyor by Mr. P. E. L. Gethin provoked a lively discussion. Admiral H. P. Douglas, to whom the success of the Conference was due in no small measure, described hydrographical methods. A summary presentation of the present knowledge of tides in British waters was given by Prof. J. Proudman, following an admirable description of tidal instruments by Prof. A. T. Doodson; Comdr. E. C. Shankland lectured on the hydrology of the Thames estuary. Optical distance measurement was dealt with by Major R. L. Brown, and the possible improvement of the barometer was not ignored. Sir Henry Lyons described early methods of survey in Egypt and the Roman Empire. The Astronomer-Royal gave the results of the most recent experience on the reception of *W/T* signals, and Dr. L. J. Comrie gave a lecture on the *Nautical Almanac* and mechanical computation.

It will be seen that much ground was covered outside the main work of the Conference. Within this sphere there was an eloquent address from Sir John Stewart-Wallace on land registration in Britain.

Papers on land survey were sent by Mr. F. H. Peters, Surveyor-General of Dominion Lands, Canada, by Mr. A. H. G. Dawson, Surveyor-General of Ceylon, and by Mr. W. F. N. Bridges for the Surveyor-General of Malaya, the latter being a complete account of the survey and registration in that Colony. Mr. Maxwell Edwards, Surveyor-General of the Transvaal, and Mr. W. G. Fairweather of Northern Rhodesia read papers on property surveys and registration in their respective spheres. Lieut.-Col. C. H. Ley sent a paper describing the somewhat difficult cadastral structure of Palestine; another came from Mr. C. O. Gilbert, the Director of Surveys in Kenya. Col. M. O'C. Tandy annotated a paper by Cols. Campbell and Gwynn on rectangulation surveys in India, which bear some relation to the system in the Prairie Provinces of Canada; the discussion was continued by Colonel MacLeod, Chief of the Geographical Section of the General Staff, whose organising ability contributed greatly to the success of the meetings, at which he often took the chair in the absence of the president. It is not possible to summarise all the work done by willing hands in the field of land survey, but it may be said that there were few of the difficulties in the Empire which were not ventilated. A most instructive exhibit of cadastral maps was arranged at the Science Museum by the spontaneous labours of Sir E. M. Dowson; this was by no means limited to the Empire, since France, Italy, Switzerland, and Egypt made generous contributions, often involving a considerable amount of work.

Other subjects discussed were topography, the training of native surveyors, the *Empire Survey Review*, the Field Survey Association, and the position of the licensed surveyor in Canada, Kenya, Trinidad, etc.

These first two conferences have owed their success largely to the efforts of Sir Cecil Bottomley and to Mr. E. B. Bowyer, chairman and joint secretary of the Colonial Survey Committee. The proceedings will be published by H.M. Stationery Office early next year. It was decided to recommend the convening of a third Conference in 1934.

### Coloured Glass as a Deterrent to House Flies.

AN interesting series of tests with the object of finding whether rooms glazed with 'Calorex' are likely, by virtue of the special properties of the glass, to be freer from insects than rooms glazed with ordinary glass has recently been carried out at the Imperial College of Science and Technology under the supervision of Prof. J. W. Munro, on behalf of Messrs. Chance Brothers and Co., Ltd.

Calorex glass is of a pale greenish-blue tint, and is designed to afford protection from excessive solar radiation by strongly absorbing infra-red radiation whilst transmitting in a useful degree the radiation within the visible spectrum. The present experiments, which have been conducted with several types of insect, but mainly with flies, bees, and wasps, confirm and amplify observations made at the Building Research Station at Garston, Herts, and described by Mr. H. E. Beckett in NATURE.<sup>1</sup>

House flies (*Musca domestica*) exposed to sunlight in a box, one half of which was glazed with Calorex and the other with ordinary glass, showed a marked preference for the ordinary glass, the ratio of the numbers of insects in the two halves, averaged over several experiments, being about 9 : 4. These results were verified by other tests in which the insects were not enclosed within the box but were attracted to it by a suitable bait. Wasps and bees were found to behave in the same way as flies.

Much of the preference shown is ascribed to the inequality of temperatures beneath the two kinds of glass, the disparity in insect population being greatest when the maximum temperature differences were observed. Confirmatory evidence of a positive effect with temperature differences maintained by agencies other than radiation is not, however, chronicled.

That an effect can definitely be ascribed to the colour of the light which has passed through Calorex was demonstrated by an experiment in which bees were enclosed in a glass cylinder, one end of which was closed with Calorex and the other with ordinary glass. By interchanging the glasses an immediate reaction was obtained, the bees moving to the end covered with ordinary glass.

The effect of coloured light does not seem to be peculiar to blue light. Messrs. Pilkington Brothers, Ltd., from experiments conducted last year, have stated<sup>2</sup> that the house fly prefers white light to coloured light, and that red and yellow are the best deterrents, being considerably more effective than blue and green. On the other hand, it has been stated<sup>3</sup> that blue glass is completely effective.

The most extensive use of coloured glass for this purpose at present seems to be in meat stores. In such buildings yellow glass is unpopular on account of the sickly appearance which it imparts to the meat, and blue glass has been used with some success. In

Holland the use of blue glass has, moreover, been extended to cow-houses with beneficial results. The glass, although of a distinctly different tint from Calorex, appears to share with the latter to some extent its power of absorbing the infra-red radiation of the sun, so that temperature effects may be partly responsible for the positive results obtained. The value of yellow glass cannot, however, be ascribed to such an effect. More information is obviously required on this most practical problem.

- <sup>1</sup> NATURE, 125, 780, May 24, 1930.  
<sup>2</sup> NATURE, 125, 529, April 5, 1930.  
<sup>3</sup> NATURE, 125, 780, May 24, 1930.

### University and Educational Intelligence.

**BIRMINGHAM.**—The vacancy caused by the retirement of Prof. F. W. Burstall from the chair of mechanical engineering has been filled by the appointment of Mr. Samuel Lees. Mr. Lees studied at Manchester College of Technology and St. John's College, Cambridge. He took the Mathematical Tripos and afterwards did research under the late Prof. B. Hopkinson, being elected to a fellowship of St. John's College in 1912. He was Hopkinson lecturer in thermodynamics at Cambridge (1919–29) and director of engineering studies at St. John's College (1924–29). Since 1929 Mr. Lees has been consulting engineer to Messrs. Silica Gel, Ltd.

**LEEDS.**—The University has instituted a diploma in public administration, the course of study for which will commence in October 1931. The course will extend over two winter sessions.

**SHEFFIELD.**—The Council of the University has decided to appoint a professor of electrical engineering. It is hoped to make the appointment in time for him to take over his duties in the early part of 1932.

**MR. SIDNEY WEINTROUB**, of St. John's College, Oxford, has been appointed an assistant lecturer in physics at University College, Southampton.

The Wilbur Wright memorial lecture of the Royal Aeronautical Society will be delivered on Wednesday, Sept. 16, at 9.15, in the Science Museum, South Kensington, by Mr. Glenn Martin, who will take as his subject "The Development of Aircraft Manufacturing".

The following scholarships for 1931 have been awarded by the Institution of Electrical Engineers: Duddell Scholarship (annual value £150; tenable for 3 years): C. H. W. Clark (Sevenoaks Grammar School); Silvanus Thompson Scholarship (annual value £100, plus tuition fees; tenable for two years): C. H. Lackey (Messrs. A. Reyrolle and Co., Ltd.); David Hughes Scholarship (value £100; tenable for 1 year): G. L. d'Ombra (City and Guilds (Engineering) College); Salomons Scholarship (value £100; tenable for 1 year): S. H. Padel (Manchester College of Technology); War Thanksgiving Education and Research Fund (No. 1): grants of £50 each to F. J. Clark (East London College) and J. H. Wagstaff (University College, London); Thorrowgood Scholarship (annual value £25; tenable for 2 years): P. W. Ottley (Underground Electric Railway Company of London, Ltd.); Paul Scholarship (annual value £50; tenable for 2 years): W. T. Darwin (L.C.C. School of Engineering and Navigation).

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### Birthdays and Research Centres.

**Aug. 16, 1863.**—Prof. F. S. KIPPING, F.R.S., professor of chemistry in University College, Nottingham.

Nearly thirty years ago the study of some organic derivatives of silicon was commenced, with the primary object of proving that compounds of the type  $\text{SiR}_1\text{R}_2\text{R}_3\text{R}_4$  existed in enantiomorphously related, optically active forms. During the progress of this work, various interesting by-paths were encountered and, with the help of many students, some of these have been partly explored. The results have indicated that silicon analogues of many of the more important types of carbon compounds cannot be obtained, and that silicon is incapable of uniting with itself, with carbon, or with oxygen, by a 'double bond'. On the other hand, the formation of chains of silicon atoms, linked together directly or by an atom of oxygen, often takes place with unexpected facility, giving highly complex products, many of which cannot be isolated and identified.

**Aug. 19, 1868.**—Prof. W. BULLOCH, F.R.S., Goldsmiths' professor of bacteriology in the University of London.

Ever since Lister (1869) introduced into surgery the principle of the antiseptic absorbable ligature in the form of catgut, this has always been a problem. Some years ago I was requested by the London Hospital authorities to investigate complaints regarding the sterility of samples of catgut sold in commerce. Much of the 'sterile' catgut was found not to be so, and the catgut sold by several manufacturers was found indeed to be uniformly (100 per cent) infected and presumably harmful. To remedy this so far as my own hospital was concerned, I carried out a systematic investigation of the methods of sterilising catgut, and this involved testing more than 30,000 ligatures. Two methods were found to be effective in producing sterile catgut. In conjunction with Messrs. Lampitt and Bushill, of the laboratories of J. Lyons and Co., a report was issued by the Medical Research Council, and the result was that surgical catgut was brought under the Therapeutic Substances Act, and the tests we had laid down were enforced. Two years' experience of the new conditions relative to the manufacture of surgical catgut in England and abroad has shown that at the present time the catgut is much better than was previously the case, and the risk of ligature infection in surgical operations has been greatly diminished.

In my leisure I devote my time to the study of the history of the sciences associated with medicine.

**Aug. 19, 1874.**—Prof. A. H. REGINALD BULLER, F.R.S., professor of botany in the University of Manitoba.

I am interested in the relations of fungi with various animals; and two species of Fungi Imperfecti, which attack and kill large numbers of larval nematode worms (*Strongylus* species, parasites of the horse) as these wriggle about in horse dung, are being investigated in my laboratory.

My chief occupation just now is the completion of the manuscript and the illustrations for another volume of my "Researches on Fungi". This volume, in part, will treat of *Pilobolus* and the ocellus function of its subsporangial swelling, *Sporobolomyces* regarded as a basidiomycetous yeast, *Tilletia tritici*, which causes the stinking smut disease of wheat, and *Sphaerobolus stellatus*, a small gasteromycete allied to the puff-balls, which can shoot its ball of spores a horizontal distance of eighteen feet.