

## News and Views

### The University of Sheffield

THE University of Sheffield, although only a little more than thirty years old, has taken an established place among the universities of Great Britain, and is attracting an increasing number of students. Recent years have witnessed some important developments and additions to the buildings, including a new department of mining, a school of dentistry, hostels for men and women and a new students' union. These additions have been largely due to specific gifts to the University. But in nearly all departments the present buildings are overcrowded. Teaching and research are carried on under conditions discouraging and hampering to both students and staff. Moreover, the limited resources of the University, imperilled by recent falls in rates of interest, limit the possibilities in securing the best men to fill vacancies on the staff and keep salaries below the usual level of other universities. To meet the urgent requirements for buildings, equipment and endowment, the University has issued an appeal for £250,000. Not less than £450,000 is required for complete fulfilment of requirements, but the lesser sum represents the minimum for outlay that is long overdue.

The departments suffering most are medicine, geography, architecture, engineering and metallurgy. It is proposed to begin with the building of a new wing as part of a more comprehensive scheme. This wing will accommodate botany, zoology and geography, thus liberating other rooms occupied by these subjects. Engineering and metallurgy will find further accommodation by the acquisition of new and adjoining the applied science department of the University. The completion of these buildings would for a few years relieve a congestion that has become intolerable. But equally urgent is the provision of further space for the growing library. The present library, with space for only one year's normal addition of books and periodicals, and reading space for only a small number of students, must be extended. The proposal is to add to the library the present assembly hall, known as the Firth Hall, which is much too small for its present purpose and has very bad acoustic properties. This will entail the building of a new assembly hall of adequate size. For the main extensions the University already has the land but the houses that occupy it will have to be demolished. Some of them at present accommodate in small and unsuitable rooms departments in the faculties of arts and law. Further land, however, is urgently required for the extension of playing fields for the growing number of students. Plans for the completed university have been prepared by Mr. T. Lodge and are published in the pamphlet which the University has issued. The gift of large sums to the universities of other large industrial towns has set an example which it is hoped may be

followed in Sheffield now that the economic depression seems to be passing. Contributions to the extent of £54,000 have already been promised, including a sum of £10,000 from Sir Robert Hadfield, to whom the University is already indebted for generous gifts in the past.

### New Laboratory for Research in Aeroplane Materials

ON October 3, Mr. D. R. Pye, deputy director of technical development at the Air Ministry, formally declared open the laboratories of Aero Research Ltd., Duxford, Cambridgeshire, by setting in motion a press of 1,300 tons capacity. The ceremony was to have been performed by Mr. H. T. Tizard, chairman of the Aeronautical Research Committee, but he was unfortunately prevented at the last moment from doing so by illness. Aero Research Ltd. is a private research organization working in co-operation with Messrs. the de Havilland Aircraft Co. Ltd. and with the Department of Scientific and Industrial Research, chiefly on synthetic resin materials. A number of demonstrations was given of the properties of the materials developed, and it was shown that the apparent brittleness in static fracture is counterbalanced by a high energy absorption which results in a remarkable freedom from 'notch sensitivity'; at the same time the amorphous structure of the material gives exceptionally good fatigue properties. Controllable pitch airscrew blades were shown, designed and manufactured by the de Havilland Aircraft Co. Ltd. from material supplied by Messrs. Bakelite Ltd., which had withstood successfully severe tests in addition to sixteen and three quarter hours actual test flying (involving continual changes of pitch) and fifty engine backfires. Other demonstrations were given of X-ray apparatus, photo-elastic apparatus, special testing machines and of the utility of mass balancing in preventing wing flutter.

### Records of Bird-Song

ON October 6 a private hearing was given by Messrs. H. F. and G. Witherby of some wonderfully successful gramophone records of British birds singing in their natural haunts. These are to be issued next week with a book on "Songs of Wild Birds" by Mr. E. M. Nicholson, said to be the first work to be published in Great Britain with auditory as well as visual illustrations. The records themselves were made by Mr. Ludwig Koch, with the assistance of Mr. C. Horton-Smith and the technical co-operation of the Parlophone Company. The material given on two double-sided disks, running for twelve minutes in all, has been selected from a large number of recordings. The practical difficulties to be overcome were obviously great, but the results obtained are well worth much labour. The songs of such musicians as the nightingale and blackbird are beautifully