REPORTS OF RESEARCH COMMITTEES OF THE COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

BUILDING RESEARCH COMMITTEE

Building Research Committee.—Mr. G. F. Wilson (Chairman), Mr. G. W. Albertson, Dr. J. C. Andrews, Mr. B. C. Ashwin, Mr. L. E. Brooker, Mr. R. A. Campbell, Mr. A. R. Entrican, Mr. J. Fletcher, Mr. F. W. Furkert, Mr. A. R. Galbraith, Professor C. R. Knight, Mr. L. J. McDonald, Dr. E. Marsden, Mr. J. Mawson, Mr. R. A. Patterson, Mr. C. W. O. Turner, Mr. F. J. A. Brogan (Secretary).

The following appointments to the Committee were made during the year: Dr. J. C. Andrews, as representative of the Council of Scientific and Industrial Research, in place of Professor H. G. Denham, whose death occurred in February, 1943; Mr. A. R. Galbraith, Chairman of the New Zealand Standards Council; Mr. A. R. Entrican, Director of Forestry; and Mr. L. E. Brooker, Chief Architect and Property Supervisor of the State Advances Corporation.

A panel comprising Professor C. R. Knight (Chairman), Professor of Architecture, Professor T. D. J. Leech, Professor of Engineering, and Professor P. W. Burbidge, Professor of Physics, with power to co-opt, was set up to supervise research projects allocated to Auckland University College by the Building Research Committee.

A sub-committee consisting of the Chairman, Mr. G. F. Wilson, Professor C. R. Knight, and Mr. J. Mawson prepared a report setting out their views as to lines along which a comprehensive plan for the building industry should be developed as a prerequisite to a research plan, and recommending the nature and the scope of the surveys that would be necessary to obtain the basic information required. This report was adopted by the Building Research Committee and submitted to the Hon. Minister of Scientific and Industrial Research for transmission to the Right Hon. the Prime Minister, the Hon. Minister of Works, and other Ministers concerned.

It was not possible during the period under review to implement the Committee's recommendation for the appointment of an Acting Director of Building Research. Inquiry was made as to the possibility of obtaining the services of a senior officer of the Building Research Station, Watford, England, for a period, but owing to the stress of war and reconstructional work this was not possible. The Director of this station, however, generously offered to train personnel if they could be sent from New Zealand, and this offer has been accepted to the extent of sending Mr. J. L. Mandeno, M.Sc., a chemist on the staff of the Dominion Laboratory, for a period of some months' training in the chemical aspects of building research and testing of building-materials.

The Timber Protection Research Committee and a special Committee set up to deal with the problem of mould growth on the linings of houses were brought under the Building Research Committee in accordance with the policy of co-ordinating under one Committee all research activities relating to building.

The appointment of two representatives of the Standards Institute to the Building Research Committee has ensured that the work of that organization in connection with the development of a National Building Code and the related standard specifications for materials, equipment, and processes will proceed with full regard for the work of the Building Research Committee. In this way the results of the various research projects carried out from time to time will be embodied in the appropriate standard specifications and so made available to the building industry in a way that will ensure that the fullest practical benefit is derived from the research carried out.

The following is a summary of the research work carried out during the year:—

TIMBER PROTECTION RESEARCH

Timber Protection Research Committee.—Mr. L. E. Brooker (Chairman), Mr. E. H. Walden, Dr. D. Miller, Dr. G. H. Cunningham, Mr. R. L. McPhail, Mr. N. A. Marris, Mr. R. L. Andrew, Mr. F. R. Callaghan, Mr. A. F. Clark (Secretary).

DOMINION LABORATORY

During the year the Laboratory has carried out chemical analyses and investigations required by the Committee.

ENTOMOLOGY DIVISION, PLANT RESEARCH BUREAU

Termites.—Investigations have been continued into the biology of the two native termites, *Calotermes brouni* and *Stolotermes ruficeps*. Though the difficulties of rearing *C. brouni* under laboratory conditions have not been fully overcome, it has been possible to maintain colonies for twenty-eight months, but without any increase in the number of individuals. It has been found that decayed wood is essential for the alates of *C. brouni* to start new colonies and that these are established at ground-level. Attention is being given to the factors influencing the development of the different castes in a colony. Similar studies are being carried out with *S. ruficeps*, and in this case information has been secured on the activities of the termites at the time when the winged forms issued from the timber.

In regard to Australian termites, an attempt has been made to develop a reliable method, based on "workers" characters, by which the three species of *Coptotermes* can be identified. In co-operation with the termite-control operations, valuable data on the Australian termites in service timbers have been secured. Examination of imported Australian hardwoods (power-poles, sleepers, &c.) revealed that living drywood and subterranean termites are still being imported by this means.

Anobium.—In co-operation with the Plant Diseases Division, investigations into the biology of *Anobium punctatum* were undertaken. A study was made of the factors controlling oviposition and of the influence of seasoning of both kiln and air-dried sapwood upon *Anobium* attack, with a view to securing data on the best methods of treating various timbers as a protection against borer attack.