SCIENTIFIC EVENTS

THE IMPERIAL AGRICULTURAL RESEARCH BUREAUS

THE *Journal* of the Australian Council for Scientific and Industrial Research gives a summary of the first annual report of the executive committee concerning the organization and objects of the eight new Imperial Agricultural Research Bureaus. Their function as defined by the 1927 Imperial Agricultural Research Conference, which recommended their formation, is to facilitate the collection and dissemination of scientific information among the agricultural research workers of the empire.

The executive council itself is composed of nominees of the different governments of the empire, and it elects its own chairman and appoints its own officers. To that extent the organization of the bureaus is somewhat unique, in that in a technical sphere of work the administrative direction of activities for a common empire purpose is vested in a body composed of nominees of the governments, and not in one of His Majesty's governments acting on behalf of all governments.

The eight bureaus, namely, those of soil science, animal nutrition, animal health, animal genetics, animal parasitology, plant genetics (herbage plants), plant genetics (other than herbage plants) and fruit production have now been fully organized and are all actively functioning. Their location at existing research institutes has enabled them to operate economically and efficiently. The various institutes have placed accommodation at the disposal of the bureaus on generous terms, and have assisted in numerous other ways, but particularly by making their libraries freely available, and by allowing their officers to give advice and help on particular inquiries. Although the bureaus were established only recently, several of them were able, before the close of the year, to commence the distribution (at first in mimeographed form) of information in their particular branches of agricultural science. For instance, the Bureau of Animal Nutrition has issued a collection of reprints of special interest to investigators, and also a summary of research work on animal nutrition now in progress throughout the empire; the Bureau of Soil Science has issued a number of "technical communications," particularly in regard to soil classification; and the Bureau of Animal Genetics is issuing a quarterly journal containing a number of articles which would ordinarily be quite inaccessible to research workers in the more distant parts of the empire.

Another object of the bureaus is to facilitate arrangements for research workers granted "study leave" to undertake well-thought-out courses of further study and investigation. All the directors of the bureaus would be glad to advise any investigators interested. Another function on which the executive council and the directors lay special stress is that of promoting in every way possible direct contacts between officers of the bureaus and research workers overseas. To further this end, an officer who has either received part of his early training or has served for some time in some portion of the empire overseas, has been selected in almost every case for the post of chief officer under the directors. The executive council hopes that research workers who contemplate visiting the United Kingdom in any year will inform the appropriate bureau of their intention. It also hopes that they will visit the bureau, where they will be assured of a hearty welcome.

MINERAL VALUES IN ALASKA

AN effort to determine the mineral values of Alaska will be carried out this summer by the Department of the Interior. The recent Congress appropriated $250,000 "for continuation of the investigation of mineral and other resources of Alaska," along the Alaska Railroad. This is in addition to the regular appropriation for work in Alaska.

The appropriation was placed in the hands of Secretary Wilbur and the work has been organized through the U. S. Geological Survey. Though this special appropriation is not available until July 1, the Geological Survey, considering the short working season in Alaska, has arranged to make advances from its own funds that the work may be started early and a full season of results attained.

Sixty thousand dollars has been allocated to Willow Creek, Fairbanks, Copper Mountain, Girdwood, Kantishna and Moose Pass districts, and a party will operate in each of these areas. Twenty-four thousand dollars have been allocated to the West Fork of Chulitna, Valdez Creek, Talkeetna Mountains and Yentna districts and the investigators will form four parties. To investigate, test and report on nonmetallic minerals such as clay, limestone, marl, etc., in the railroad belt, and prepare a pamphlet on their economic value and possibilities of production $5,000 has been set aside. It is estimated that the surface investigation of the Anthracite Ridge coal field will cost $27,000, and that the core drilling in that field will cost $100,000.

As the purpose of the investigation is to develop natural resources along the Alaska Railroad, it is important that the results of the examinations shall be published as quickly as possible after the field work has been completed. To this end the Geological Sur-

vey will prepare at Anchorage memoranda for publication, setting forth the principal results of the individual investigations within a few weeks after the field work of the parties has been completed. Complete statements of the field results of each project, based on a more thorough study on material collected and on the interpretation of many technical observations will follow later, but will be issued at as early a date as is compatible with a thoroughly sound and accurate statement of the results.

For the above purposes the Anthracite Ridge area has been temporarily withdrawn from classification. The other areas where the ten parties will operate will not be withdrawn or in any way reserved, and this intensive work to produce tonnage will be carried on in the most promising areas, both on the public lands and with the permission of the owners on claims which are already staked. No development work will be done, but the testing of samples and intensive geological work will give the owners, prospectors and prospective investors some guide as to the possibilities of the property under study.

The Geological Survey will maintain throughout the year a representative in Alaska, with headquarters at Anchorage, to work with prospectors and mining companies, and make available to them the material gathered by the surveys herein provided. His salary and the expenses of his office will be charged against the $250,000 appropriation mentioned. He will also be a medium of coordination between the railroad and the other agencies engaged in this program. The General Land Office will aid in making surveys of the areas investigated.

THE FOREST SERVICE AND HIGHWAY COMMISSIONS

THE Forest Service of the Department of Agriculture, in instructions issued to its regional foresters, announces that hereafter there will be the fullest cooperation with the Federal and State Highway Commissions in the interest of preservation of roadside beauty and other natural scenery. The instructions read:

A. All national forest lands within 200 feet of the center line of a Class A or Class B highway, or within 100 feet of the center line of a Class C highway or road shall be administered with the major objective of conserving and augmenting the scenic, inspirational, educational and recreational values of said lands and roads, and no form of occupancy or use of said lands or the products thereof shall be allowed except with the prior approval of the regional forester or forester who, before granting such approval, shall require full assurance that proposed occupancy or use is necessary, is appropriately safeguarded, and will not result in a sacrifice of public values or services greater than the public values or services to be derived from such occupancy or use.

B. While the proposal to acquire all timbered lands contiguous to highways by granting national forest stumpage in exchange therefor is regarded by the Forest Service as impracticable, the acquisition of areas of privately owned forest land, within the boundaries of the national forests, for the purpose of conserving roadside beauty, will be accomplished as rapidly as such lands can be acquired through exchange with due regard to other requirements of public interest.

C. The detailed and systematic planning of the management and use of all national forest lands tributary to class 1, 2 and 3 roads, including not only the 400- or 200-feet strips, but also such other additional lands as may affect the public value of a given road, will be regarded as a definite and current administrative function of the Forest Service, to be carried to consummation as rapidly as the available personnel, funds and other administrative obligations will permit. National park approach roads will be given initial consideration. Project plans will be personally considered by the regional forester and when approved by him will thereafter govern all occupancy and use of the lands involved.

D. An effort to secure the approval of Congress to the employment of a limited technical personnel for the more intensive management and development of the scenic and recreational potentialities of the national forests, in which major attention would be given to the relation of the highway and road system and its adaptation to the natural values involved.

LECTURES IN PHYSICS AT THE UNIVERSITY OF MICHIGAN

THE department of physics, University of Michigan, announces the following special lectures for the summer session of 1931:

PROFESSOR ARNOLD SOMMERFELD, University of Munich.

Electron Theory of Metals. (First half.) Introduction to the Fermi-Dirac statistics. Richardson Effect. Problems of Conductivity. Thermoelectric and thermomagnetic effects. Problems of specific heat.

Selected Problems of Wave Mechanics. (Second half.) Photoelectric effect, especially with x-rays. Advancing of the radiation maximum for different shells. Continuous x-ray spectrum. Diffraction of electron rays.

PROFESSOR W. PAULI, University of Zurich.

Problems of Nuclear Physics. (First half.) Application of the theory of potential thresholds to nuclear disintegration. Nott's theory of impact of alpha particles on helium. Nuclear spin and band spectra. Hyperfine structure, especially of ionized lithium. The electric quadrupole moment of the nucleus.

Application of Quantum Theory to Problems of Thermal Equilibrium. (Continuation of Electron Theory of Metals.) (Second half.) H theorem. Ferromagnetism. Conductivity of metals at low temperatures. Influence of space lattice forces upon thermoelectric effects.