

his botanical library are to be turned over to the college.

DR. HELEN UPDEGRAFF (Mrs. Arthur F. Cary), physiological chemist in the chemical laboratory of the Massachusetts Eye and Ear Infirmary, died on Oc-

tober 25. She was a daughter of Dr. Milton Updegraff, professor of mathematics, U. S. Navy, retired.

ALFRED BOSTOCK HILL, emeritus professor of hygiene and public health at Birmingham University, died on November 6. He was seventy-eight years old.

## SCIENTIFIC EVENTS

### INDUSTRIAL RESEARCH IN GREAT BRITAIN

THE report of the Committee on New Industrial Development set up by the British Economic Advisory Council in March, 1931, under the chairmanship of Mr. J. H. Thomas, has been issued. The conclusions are summarized as follows:

Having examined the various arguments which have been put forward in support of the proposed establishment of a new national research organization as outlined in our terms of reference, we consider that such an organization would cut right across the existing organization of the Department of Scientific and Industrial Research, and would be likely in practice, by the confusion of purpose and distraction of effort it would cause, to injure rather than to forward the cause of scientific research in British industry.

Moreover, we are satisfied that the existing government organization for the promotion of industrial research is efficient, and is sufficiently flexible to enable it to develop along such lines as may be desirable to meet the changing needs of industry.

We are, therefore, unable to recommend the establishment of a new national organization along the lines suggested.

It is highly desirable that there should be at the disposal of government a small fund capable of being readily used for research developments, such as that which is at present at the disposal of the Advisory Council for Scientific and Industrial Research. We consider, therefore, that when the balance of this fund is surrendered to the Exchequer at the end of the current year a sum of money should continue to be available for expenditure on research developments or unforeseen requirements by suitable provision in the department's annual estimate.

The evidence which we have received shows clearly how valuable are the services rendered to industry by the research associations established by particular industries, and we trust that it will be possible for his Majesty's Government to continue to provide financial assistance to these bodies on a scale sufficient to enable them to function effectively until such time as industry is in a position to bear the whole of their cost.

Dealing in the report with the suggestion that there is a gap in our research arrangements, the committee says that it doubts whether greater progress would be secured by attempting to work on more centralized

lines, inasmuch as the value of research depends on a readiness to apply its results. Moreover, the Department of Scientific and Industrial Research is always willing to create organizations of its own in important industrial fields where it recognizes that a need for research exists. The committee holds, also, that there appears to be little danger in practice that discoveries arising in one part of the industrial field, as the by-product of research there carried on, will be wasted through lack of knowledge of them in the industries to which they are chiefly of interest.

The committee considers that the question of the extent to which facilities should be provided for large-scale tests, or for what is sometimes called "development research," is not one that can be settled in general terms, and that so far as organization is concerned, the requirements of development research seem to be adequately provided for by the machinery of the Department of Scientific and Industrial Research and provide no useful scope for the creation of a new organization.

### SCIENTIFIC WORK IN CHINA

THREE years ago there was organized in the Little Gorges, near Chungking of Szechuan province, an Academy of Science of Western China. This institute is supported primarily by private contributions. It has now an annual budget of \$40,000 Mex. for research and survey work in geology and biology. With the help of Dr. H. H. Hu, director of Fan Memorial Institute of Biology at Peiping, a herbarium and a botanical garden has been established by the academy, with a view to exploring all parts of the province and eastern Tibet and to collecting seeds, cuttings, bulbs, etc., for planting in the botanical garden. It is planned to establish in the garden a nursery where seeds and bulbs will be provided for sale or exchange. For instance, the collector was instructed to collect seeds of *Rehderodendron*, a new genus of three species of ornamental trees of *Styracaceae*, recently described by Dr. Hu. Seeds of other interesting and ornamental plants will be assiduously collected. The Arnold Arboretum of Harvard University will be the first in the United States to share a part of this collection. This year two parties have been sent out by the arboretum to collect herbarium specimens and seeds, one to eastern, another to southwestern, Szechuan.

The latter is exploring the bordering district along the Szechuan-Yunnan-Tibet borderland. In the winter the collector will bring herbarium specimens and seeds to the Fan Institute for study and identification, as that institute has a large herbarium and a large botanical library, and furthermore a unique collection of photographs of the type-specimens of Chinese and other Asiatic countries taken in various European herbaria, amounting to the large number of 17,000.

In the spring of 1932 a joint botanical and zoological expedition was sent to eastern Yunnan by the Fan Memorial Institute of Biology, Peiping, starting from western Szechuan and exploring the bordering regions of Szechuan, Kweichow and Yunnan. The party expects to be wintered in Yunnanfu. The botanical staff will endeavor to explore regions not yet thoroughly worked over and will collect specimens in the type-localities. Besides collecting flowering plants, special attention will be paid to mosses, liverworts, ferns and other cryptogams. The zoological staff will collect birds, fishes, other lower vertebrates and land shells. News has been received that the party succeeded in penetrating the forbidden territories of Ta-Liang-Shan lololands, where probably no white man has ever entered. The lolos are very warlike tribes, who frequently kidnap Chinese and make them slaves. The present powerful chieftainess is the sister of the present military governor of Yunnan, and has enlightened views as to the purpose of scientific expeditions. Members of the party were welcomed as her guests. Oxen and pigs were slaughtered in their honor, and an elderman of the tribe was handed over to the district magistrate as the pledge of their safety. As two years ago the lamentable death of the eminent young Chinese paleontologist, Ya-Tseng Chao, at the hands of bandits had cost the district magistrate of Chao Tung Hsien a permanent dismissal from office, this precaution is carefully taken by his successor. The party plans to explore the southeastern part of Yunnan next year.

A. B. D. FORTWYN,  
*Secretary of the Peking Society  
of Natural History.*

#### THE MORRIS ARBORETUM AND THE UNIVERSITY OF PENNSYLVANIA

WITH the establishment of the Morris Arboretum as a part of the University of Pennsylvania the university is now looking forward to a time when it will become an important center for botanical study and research.

The arboretum, which was bequeathed to the university by the late Miss Lydia Thompson Morris, of Philadelphia, who also established the Morris Foundation with a liberal endowment for the support of the arboretum and for the support, in part, of the

work in botany at Pennsylvania, covers 170 acres and is one of the outstanding arboretums of the country.

It is situated in Chestnut Hill in the heart of one of the most picturesque sections in the Philadelphia suburban area and is within easy access of the University campus in West Philadelphia. Included in the arboretum are two estates, "Compton," which was the home of Miss Morris, and "Bloomfield," an adjoining estate.

The Morris Arboretum had its beginning during the life-time of John T. Morris, brother of Miss Morris, who began to assemble a collection of trees and shrubs at "Compton" and who, through cooperation with Dr. C. S. Sargent and the Arnold Arboretum, of Boston, in the expeditions of E. H. Wilson into the Orient, obtained many treasures from eastern Asia.

The collection of coniferous evergreens is an exceptionally fine feature of "Compton" and includes not only Asian, African, Australian and European species, but some of the rare kinds from western North America. Young specimens of the *Sequoia gigantea*, of California, are among the later plantings, and the one-leaved pine, *Pinus monophylla*, from the arid southwest, is of much interest to the scientific student of trees.

To the critical botanist the collection of thorn-apples, *Crataegus*, also is of particular interest, the great variety and richness of this collection giving evidence of the close relation between "Compton" and Dr. Sargent. The Albizzia, or jujube tree, near its northern limit at "Compton," Sargent's oak and many other specimen trees claim attention.

The university has not yet formulated its entire program for the utilization of the Morris Arboretum, but an indication of the extent and variety of the activities which will center around the arboretum is provided through the will of Miss Morris in which she expressed eight specific desires relative to the administration of "Compton" and "Bloomfield." These are:

That "Compton" and "Bloomfield" be maintained as an arboretum, and that use of income for this purpose be not subordinated to any other purpose.

That a laboratory for botanical research and dissemination of knowledge be maintained, although not necessarily on the estate.

That research be conducted in this country and abroad.

That scholarships to send boys and girls to school and college to study horticulture and kindred subjects be established.

That a post-graduate course be maintained at "Compton" and "Bloomfield."

That books and pamphlets, free or at cost, be published on the research work or kindred subjects.

That eminent scientific lecturers be employed.

That plants be distributed to the public.

H. L. H.