

THE ROCKEFELLER FOUNDATION

IN his review of the work of the Rockefeller Foundation in 1940, the president, Dr. Raymond B. Fosdick, refers to the limitation of the Foundation's work through the extension of the War. Projects in Norway, Belgium, Holland, Denmark, France and Rumania could no longer be assisted, but in spite of this interference, 23 per cent of the Rockefeller Foundation appropriations of 9,854,497 dollars during the year were spent abroad in forty-four countries in Europe, Asia, Africa and the Americas in six major fields—public health, natural sciences, social sciences, medical sciences, humanities and rural reconstruction in China. Early in July 1940, a Health Commission to Europe was organized, and Dr. Willow A. Sawyer, director of the International Health Division, made two extended trips to Europe, visiting France, England, Spain and Portugal. A bacteriologist-epidemiologist has been sent to England at the request of the Ministry of Health to study the influenza problem, and plans are under way to send one or more experts in nutrition and a specialist in typhus fever to Spain, and a bacteriologist-epidemiologist to France. Restrictions of communications between Europe and America have severely limited the development of this programme, but Dr. Fosdick refers to work in the Foundation's laboratories under Dr. F. L. Horsfall on the development of a satisfactory anti-influenza vaccine. It is hoped that by the winter of 1941-42 an experimental vaccine will be available which can be applied to at least three different types of the influenza disease.

The report gives further details of the progress of the campaign against the *Anopheles gambiae* mosquito in Brazil, which has now restricted the activities of

this fly to the low Jaguaribe valley, and it appears possible to contemplate its eradication from Brazil. Investigations on yellow fever in Colombia suggest that it is primarily a disease of jungle animals, transmission from man to man by the *Aedes aegypti* mosquito being a secondary cycle depending on population conditions and mosquito breeding created by man himself. Transmission of jungle yellow fever appears to be by jungle mosquitoes from animal to animal, and there is no animal reservoir of virus in the usual sense. Vaccination of the population in contact with the infected forest area is the most important measure of control. The Foundation supplied 250,000 doses of its yellow fever vaccine to the Sudan at the request of the British Government to deal with a sharp outbreak of the fever in the Nubian mountains.

A new school of public health is being developed at the University of Michigan with a grant of 500,000 dollars from the Foundation and a similar sum from the W. K. Kellogg Foundation. Most of the appropriations in medical sciences in 1940 relate to teaching and research in psychiatry, neurology and psychology or preventive medicine. Reference is also made to the new giant cyclotron under construction at Berkeley, California, and its significance as an expression of man's hunger for knowledge and unassuageable search for truth. Here, as in his references to science and the moral order, to the challenge to the social sciences, to refugee scientific workers and the conditions in European universities, Dr. Fosdick once more reveals his appreciation of the way in which freedom and scholarship, science and learning, are bound up with the success of the cause of democracy.

SEASONAL RHYTHM OF A FLY

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PROLONGED and uniform trapping of the flies emerging from the bacteria beds of sewage works at Leeds has demonstrated a type of seasonal rhythm that is probably common in rapidly breeding insects. *Spaniotoma minima* Mg. (Chironomidae) prevails throughout the year, and during eight years of collecting has appeared in almost every week. It is at a minimum about April, increases to a maximum in August or September and then declines rather slowly. On the basis of the monthly totals the numerical change is steady and the curve of incidence is moulded partly by the progress-temperature law and partly by the pressure of competing species¹. If the weekly catches from the traps are considered, it is seen that whether the general seasonal abundance is low or high there are peak periods of emergence, shallow and obtuse in winter, sharp and abrupt in summer, abrupt and with a tendency to be flat-topped in autumn. There is evidently a periodicity in these peaks and the interval is less than that

required for a complete life-cycle. An analysis of the figures shows that successions of generations are running, always two and sometimes three.

One such succession, *A*, has been traced through seventeen generations from November 13-17, 1937, to October 14-21, 1940, when it reaches a flat-topped peak which splits. Another succession, *B*, has been traced through nine generations from October 23, 1937, to the summer of 1939, when it loses itself in *A*. A third, *C*, has been traced from December 17, 1938, when it has its origin in *B*, through eight generations to November 6, 1940. *A*, *B* and *C* run distinctly and parallel through almost one year. A portion of the record where *A* and *C* are running is shown in the accompanying table.

The generations have been traced by means of the daily average bed temperature and the thermal constants, the theoretical thresholds and required accumulations of day-degrees (*F*.) for the four phases of the cycle being as follows: maturation of the