The Rockefeller Foundation

Annual Report

1926

The Rockefeller Foundation
61 Broadway, New York

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1926

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[1] Succeeded Dr. Buttrick.
[2] Died May 27, 1926.

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THE ROCKEFELLER FOUNDATION

President's Review

To the Members of the Rockefeller Foundation:
Gentlemen:

I have the honor to transmit herewith a general review of the work of the Rockefeller Foundation for the period January 1, 1926, to December 31, 1926, together with the detailed reports of the Secretary and the Treasurer of the Foundation, the General Director of the International Health Board, the General Director of the China Medical Board, the Director of the Division of Medical Education, and the Director of the Division of Studies.

Respectfully yours,

GEORGE E. VINCENT

President

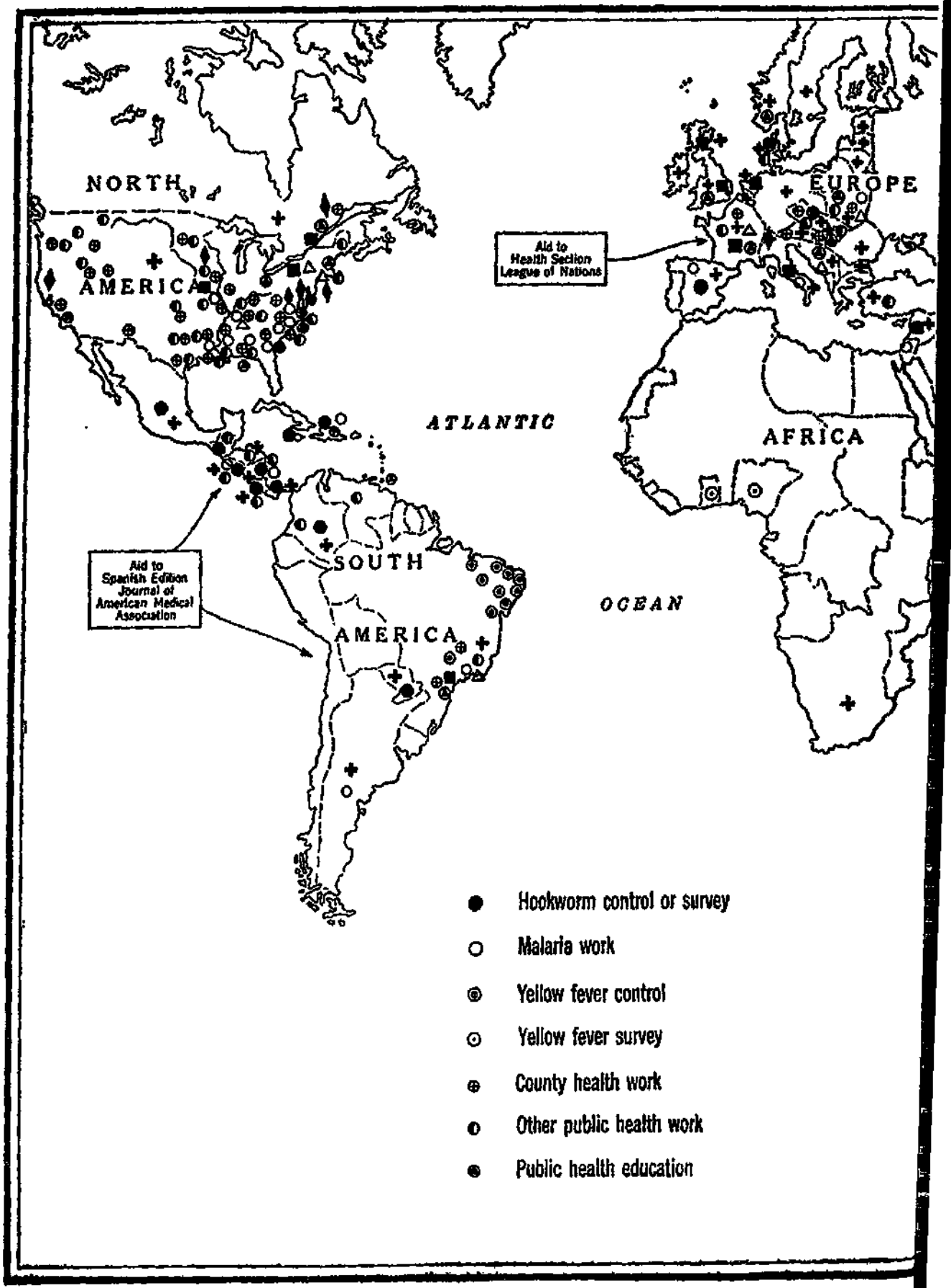
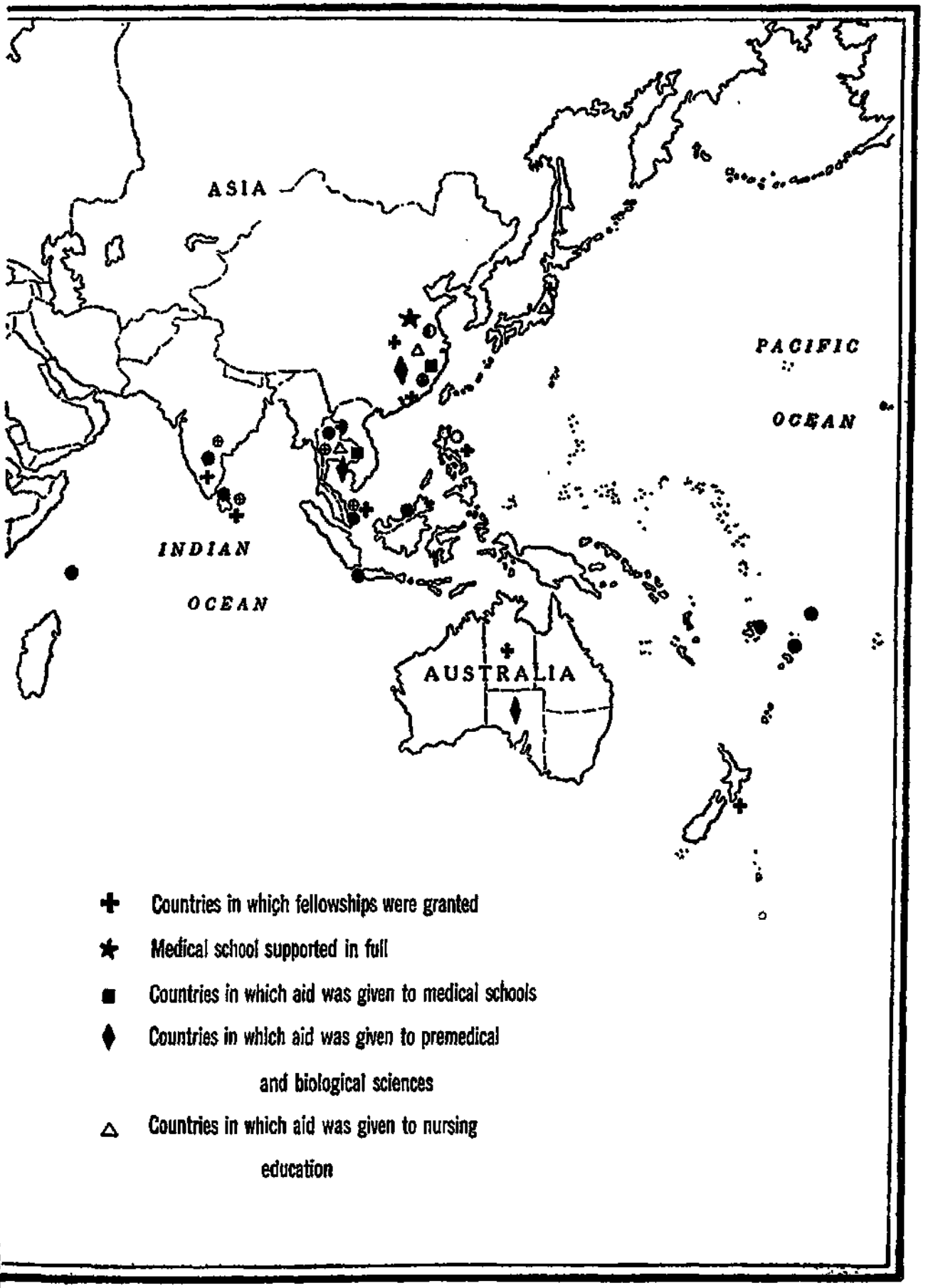


Fig. 1.—Map of world-wide activiti



of the Rockefeller Foundation in 1926.

PRESIDENT'S REVIEW

The Year in Brief

During 1926 the Rockefeller Foundation, in disbursing $9,741,474, (1) aided the growth of fourteen medical schools in ten different countries; (2) maintained a modern medical school and teaching hospital in Peking; (3) assisted the development of professional public health training in fifteen institutions in twelve countries and in ten field stations in the United States and Europe; (4) contributed to nurse training schools in the United States, Brazil, France, Poland, Yugoslavia, China, Japan, and Siam; (5) sent, as emergency aid, journals, books, or laboratory supplies to institutions in twenty European countries; (6) helped twenty-one governments to combat hookworm disease; (7) gave funds to organized rural health services in 244 counties in the United States and to thirty-four districts in twelve other countries; (8) shared in the creation or support of various departments in state or national health services in sixteen countries; (9) cooperated with Brazil in the control of yellow fever, or in precautionary measures against the yellow fever mosquito, in ten states; (10) continued

yellow fever surveys and studies in Nigeria and on the Gold Coast; (11) aided efforts to show the possibilities of controlling malaria in nine North American states and in Porto Rico, Nicaragua, Salvador, Argentina, Brazil, Italy, Spain, Poland, Palestine, and the Philippine Islands; (12) helped to improve the teaching of physics, chemistry, and biology in eleven institutions in China and in the government university of Siam; (13) supported the Institute of Biological Research of the Johns Hopkins University and contributed toward the publication of *Biological Abstracts;* (14) gave funds for biological or mental research at Yale University, the State University of Iowa, and the Marine Biological Station at Pacific Grove, California; (15) provided, directly or indirectly, fellowships for 889 men and women from forty-eight different countries, and paid the traveling expenses of sixty-nine officials or professors making study visits either individually or in commissions; (16) helped the Health Section of the League of Nations to conduct international study tours or interchanges for 120 health officers from forty-eight countries; (17) continued to aid the League's information service on communicable diseases; (18) made surveys of health conditions, medical education, nursing, biology, or anthropology in thirty-one countries; (19) lent staff members as consultants

and made minor gifts to many governments and institutions; (20) assisted mental hygiene projects both in the United States and in Canada, aided demonstrations in dispensary development in New York City, and participated in other undertakings in public health, medical education, and allied fields.

Essential Factors in Health Progress

The triumphs of preventive medicine are widely acclaimed. Health departments report the decline of communicable diseases and the fall of the general death-rate. In recent years the infant mortality rate has dropped rapidly: in London, for example, it fell from 159 deaths (within the first year) per thousand living births in 1900 to 68 in 1925, and in New York from 192 to 65 during the same period.

Smallpox is almost unknown in parts of Europe and in a few states of the United States; typhoid epidemics are rare in efficiently administered communities; tuberculosis is decreasing among many populations; diphtheria is coming under successful control; the outlook for preventing the spread of scarlet fever is brighter; malaria is being ousted from various strongholds; yellow fever seems to be making a last stand; cholera cannot seriously invade a country which has a modern water-supply and proper disposal

of wastes; typhus has few terrors for communities addicted to soap and water and clean linen.

But the modern health movement is not content with sanitation and the control of communicable diseases; it goes on to the hygiene of groups and of individuals. It is not satisfied with a negative prevention of disease; it preaches a gospel of positive, active, vigorous physical and mental well-being.

So the hygienes multiply to include mothers, babies, little children, school children, adults, industrial groups, and the victims of tuberculosis and of venereal diseases. A mental hygiene deals with feeble-mindedness, delinquency, criminal tendencies, maladjustments, and various forms of psychic disturbances. Food, clothing, posture, sleep, occupation, exercise, recreation, social relations, personal adjustments are becoming concerns of public health.

Full credit is due to sanitarians and hygienists for the results achieved; but it must be remembered that many factors have combined to reduce the amount of communicable disease, to raise health standards, and to bring down death-rates. These gains reflect not only the results of purposeful preventive and positive health measures, but record progress in economic welfare, in housing, diet, clothing, in municipal housekeeping, in the provision of public parks and

playgrounds, in the education of parents, and in popular intelligence. Here is a case of complex multiple causation. It is impossible to give to each of the many factors its just due. But it is safe to assume that the conscious efforts of organized public health agencies are playing an influential part and are too important to be relaxed.

Even this rapid glance at modern health organization and activity reveals a multiplicity of things being done by many different kinds of functionaries scattered over wide areas, organized about centers of authority, exercising power, and supported by large funds. Doctors, investigators, health officers, sanitary engineers, statisticians, laboratory workers, technicians, nurses, inspectors, accountants, clerks, combined in working units which include city, town, and country, make up the personnel. Government departments, laws, and public funds provide appointments, authority, salaries, and supplies. In many cases voluntary health agencies maintained by private gifts supplement the resources of governments, help to show the feasibility of new measures, and educate public opinion in support of official policies.

The creation and maintenance in any country of a going concern like this calls for definite things. First of all, research must be encouraged and

intercourse with world centers of investigation must be kept up, in order to have the essential scientific basis for effective work. In the second place the medical profession must be intelligent and sympathetic. The physicians of a country can make or break a public health program. It is they who diagnose maladies, report cases of communicable disease, educate their patients, make health examinations, give advice about personal hygiene, influence public opinion.

It makes a world of difference whether practitioners are wholly devoted to individual ills and curative medicine or are committed to the modern idea of prevention. The progress of public health is largely due to the leadership of doctors of imagination and public spirit. To its medical schools a country must look for the kind of training and idealism which will produce doctors of the new type. Medical education is a vital factor in the development of public health.

Again, the different kinds of officials and special workers must have technical professional training. Public health is not something to which anyone may turn without appropriate preparation. Furthermore central services of many kinds must be set up: statistical bureaus, laboratories for diagnosis and for the production of vaccines, sera, and antitoxins, departments of communicable diseases, infant welfare, public health

nursing, venereal diseases, popular education, and others.

Still further, a system of organization—rural, municipal, state, or provincial, as well as national—must be created and official relations of authority and cooperation clearly laid down. Sanitary laws and codes must give authority. Appropriate salaries, protection against political influence, retiring allowances, social recognition must attract and hold men and women of the highest type of professional efficiency and personal character.

Finally, the public must be brought, through the education of children, the wide diffusion of information, and the concrete services of clinics, health centers, and visiting nurses, to appreciate and support the idea of preventing disease and of promoting health. In a democracy at any rate, public opinion cannot be ignored, whatever the temptation of the health officer to envy the hygienic efficiency of military camps or of such an expert's paradise as the Panama Canal Zone.

To sum up: the effectiveness of a national system of public health service depends upon the appropriate and cooperative development of scientific research; medical education; the training of health officers, laboratory workers, engineers, and nurses; the creation of central services; the organization of administrative units;

the enactment of appropriate legislation; the provision of adequate funds; and the development of sound public opinion.

How the Foundation Helps

It is within this general field of medical research and teaching, training of health personnel, and organization of health services that the Rockefeller Foundation finds its chief opportunities to lend a hand. It deals almost exclusively with universities or with government agencies, local, state, or national, and with these only upon their invitation. The constant aim is to stimulate progress, to encourage experiment, to demonstrate new methods, to increase efficiency.

It takes no interest in merely quantitative expansion. Nor does it assume more than a part of the cost of a new experiment or demonstration. It wants to be a partner not a patron. When it works with a government health service, the latter agrees to assume the entire responsibility within a limited period if the project proves of value. The Foundation succeeds best when it can withdraw completely from a health project which continues, as it began, under official auspices and is supported wholly by public funds.

As for medical education the Foundation has no ready-made, standardized, inflexible system to impose upon university schools. The more

than four hundred medical teaching centers scattered through the countries of the world vary widely in national traditions, in stages of development, in methods of organization and teaching, in areas of influence. The Foundation is primarily interested in helping a selected number of medical schools to demonstrate plans of improvement in medical education which might otherwise have to be postponed or even abandoned.

The programs which make the strongest appeal include the bringing together on one site of medical laboratories and teaching hospitals, the freeing of laboratory investigators and teachers from all outside duties, and the creation of a few clinical professorships whose holders are able to devote themselves to the care of patients, to research, and to teaching on a university basis.

The Foundation is especially interested in the development of modern departments of hygiene and in the permeation of the entire undergraduate course with the idea of disease prevention. But in no case are university trustees asked or permitted to bind themselves or their successors to continue any particular methods of organization and teaching. At most they agree to give a plan a fair trial. They are free at any time to change it.

In addition to fundamental medical education, the Foundation is interested in the professional

training of health officers, sanitarians, statisticians, laboratory workers, and other personnel. Aid is given for the creating or developing of institutes of hygiene either as independent centers of research and teaching or as organic parts of medical schools. As a rule such cooperation is confined to countries in which the Foundation is assisting in public health activities. So too, assistance is given to schools of nursing because of the vital importance of modern nursing both to the teaching hospitals of medical schools and to the proper development of various public health services.

The public health program of the Foundation includes demonstrations in combating specific diseases, i.e., hookworm disease, malaria, and yellow fever; aid in improving central health department services which have to do with laboratories, vital statistics, sanitary engineering, and epidemic control; cooperation in the organization of rural health services with full-time personnel; the making of surveys; provision of field training and experience for health officers; and other forms of aid and service.

While the Foundation seeks to relate its various activities to one another and to the correlated medical and public health systems of each country with which it works, it also welcomes chances to promote international

Fig. 2.

Fig. 3.

School of Public Health, Zagreb, Yugoslavia (*above*), and Institute of Hygiene, Budapest, Hungary (*below*). The Rockefeller Foundation has contributed toward the building and equipping of these schools as a part of its program for promoting public health education.

cooperation through contributions to the League of Nations for its health work, through the granting of fellowships to medical and public health students to work at home or in countries other than their own, and through international visits of health officials, medical scientists, and administrators. The Foundation lends its influence, not to standardize national programs of medical education and public health, but to combat a narrow provincialism and to promote the freest possible exchange of ideas throughout the world.

Many-sided Cooperation with Brazil

The Foundation's relations with Brazil afford a good example of well-rounded cooperation with the national administration and the state governments of a federated country. The conditions from the outset were favorable. Oswaldo Cruz who rid Southern Brazil of yellow fever and whose monument is a medical research institute of international reputation, was the brilliant leader of a medical profession which includes many able and well-trained men. In 1916 the government authorities, advised by such doctors, invited the International Health Board of the Foundation to aid in a campaign against hookworm disease. From this beginning gradually developed a diversified program of public health,

Fig. 4.—Members of the graduating class of the Warsaw School of Nurses, an institution with which the Foundation is cooperating.

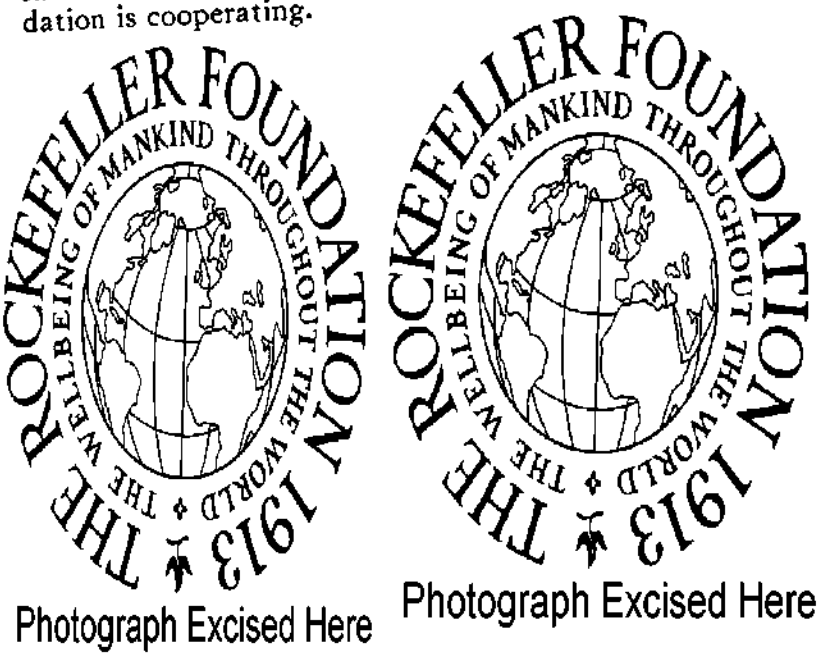


Fig. 5.—Pages from the fifth and sixth series of "Methods and Problems of Medical Education," published by the Division of Medical Education of the Rockefeller Foundation during 1926.

of education in medicine and hygiene, and of nurse training.

To trace this expansion during ten years would far exceed the limits of this review. There is space only to summarize what went on during 1926. Rural health work, an outgrowth of former antihookworm activities, was going forward in seventeen areas in the states of Minas Geraes and São Paulo. Several other units, originally started with Foundation aid, were being carried on wholly with state and local funds. Cooperative control of malaria was being continued in certain areas in the state of Rio de Janeiro, after surveys which brought to light important scientific information about malaria-carrying Brazilian species of anopheline mosquitoes.

As public health work grew it created a demand for professionally trained personnel and suggested the need for a sympathetic and cooperative medical profession to insure progress in the future. The city and state of São Paulo offered a receptive field for educational development. In 1926 comprehensive plans were well under way for the building of a modern medical center of the best type, which will include an institute of hygiene related on the one hand to the medical course and on the other to the state Department of Health. The plans for the

laboratories and hospitals were prepared by Brazilian scientists and a Brazilian architect after they had visited the leading medical centers of the United States and Europe as guests of the Foundation. Toward the total cost of the buildings, $2,600,000, the Foundation has pledged $1,000,000.

In response to an urgent request, the Foundation's International Health Board helped the Federal Government to set up a public health nursing service in the city of Rio de Janeiro and to establish a school of nursing in connection with the Hospital Geral de Assistencia. The Board undertook to help the Government to secure foreign nurses for temporary service and agreed to train a Brazilian personnel to take their places. In 1926 a spacious and beautiful hotel was assigned by the Government to the school as a nurses' home and work was begun on a teaching and service pavilion on the hospital grounds. Toward the remodeling and furnishing of the home and the building and equipping of the pavilion the Foundation contributed $130,000.

During 1926 the Foundation provided fellowships to enable twenty Brazilians to study public health, medicine, and nursing in the United States or Europe. It also defrayed the expenses of two American professors who were invited by the Brazilian Government to give intensive

graduate courses in public health and hygiene under the auspices of the Faculty of Medicine of Rio de Janeiro.

The campaign against yellow fever which was continued in Northern Brazil during 1926 was another cooperative project of great importance, but since this was part of a wider undertaking which affected several countries it is described in another section. (See page 38.)

Doctor, Sanitarian, and Nurse in Siam

Siam is another country with which the Foundation is cooperating in a number of ways, all with a bearing on the national program for medical education and public health. Since 1890 the Government has gradually created a system which includes a medical school, a public health laboratory, a health organization for the capital, Bangkok, a medical service for the rural regions, and a national health administration in the Ministry of the Interior.

In 1917 the International Health Board accepted an invitation to take part in an antihookworm campaign, which as usual stimulated other health activities. Representatives of the Board gave counsel and aid in malaria work, in antiplague measures, and in crusades against smallpox, cholera, and influenza; they also helped to organize the Siam Medical Association.

During 1926 the Foundation contributed to the budgets of five hookworm control units operating in the interior of the country and a health boat unit which navigates the inland streams and reaches large numbers of people. More than a million treatments for hookworm disease have been given since the beginning of the campaign. These demonstrations have doubtless influenced the health movement as a whole, which is now adding a modern health center with visiting nurses in Bangkok and one in a provincial town, a mobile laboratory service for the rural areas, a clinic and asylum for lepers, and active campaigns for the education of the public in hygiene.

Developments in public health emphasized the need of improving the professional training of Siamese doctors. The Division of Medical Education of the Foundation was asked to make a survey in 1921, and as a result was invited to assist in strengthening the medical school of the government university. Recently a similar request to help the school of nursing has been accepted.

The Foundation's plan for aiding the medical school consists of contributions toward new buildings, the supplementing of the government salaries of temporary foreign visiting professors of the medical and premedical sciences, the granting of fellowships to Siamese doctors who

after study abroad will replace the foreigners, and minor gifts for journals, books, and apparatus. The cooperation with the school of nursing is limited to supplementing the salaries of two foreign nurse instructors and the provision of fellowships for Siamese nurses who will, as soon as possible, take the places of the visiting leaders.

During 1926 the entire Foundation program which included four resident representatives, fourteen visiting teachers, ten fellowships, $59,000 for building funds, and $16,000 for hookworm control and incidental expenses called for a total expenditure of $162,000. The essential value of the cooperation lay not so much in money as in professional counsel, the demonstration of methods, and the spirit of comradeship in a common cause.

Medical School and Health Center in Peking

In spite of disturbed conditions in China the Peking Union Medical College, a modern teaching and research center, built, equipped, and maintained by the Foundation, continued its work without interruption during 1926. In the medical school there were sixty-four undergraduate students and eighty-two physicians doing advanced work. The school of nursing enrolled twenty-three pupils and twelve graduate students. Of the eighty-two teachers

in the institution, forty-three were Chinese and thirty-nine were foreigners.

The college seeks to set high standards of scientific training, care of patients, personal character, and public spirit. It aims at quality, not quantity, in its student body and in its contributions to science. It hopes to educate leaders who will play a part in a Chinese national system of medical education and public health. The large proportion of Chinese teachers reflects a policy which was adopted when the institution was planned in 1916. The aim has always been to develop a wholly Chinese teaching staff and ultimately to transfer the college and hospital to Chinese auspices. This plan has been so consistently followed that the first step could be taken safely in the early future.

Even now, should an emergency arise, there would be enough Chinese staff members to constitute more than a skeleton organization without any foreigners at all. The plant could be operated and the hospital kept in service. Even the instruction of students could be creditably continued in almost all departments, in a few on quite the present basis. For the hospital superintendent, the superintendent of mechanical operation, the heads of two departments, the second men in others, promising juniors in the rest, a large group of the nurses, many of the

secretaries, practically all the typists, and the subordinate personnel are Chinese. A competent Chinese director for the whole institution could probably be found either from within the present staff or from a group of well-trained Chinese doctors who have had administrative experience elsewhere. A premature and hasty transfer to Chinese control would no doubt be unfortunate for the institution, but it need by no means be disastrous, provided the Chinese staff was permitted to carry on without interference from political intrigue or public disorder.

For obvious reasons China has offered no opportunity for public health work of the kind which the Foundation is prepared to undertake. There has been no stable government with which to enter into relations. The Peking Union Medical College has, however, cooperated with the Metropolitan Police Department in creating a health center, which during 1926 had its first full year of operation. The activities have included sanitation, the gathering of vital statistics, the control of communicable diseases, and medical service through a clinic which does both curative and preventive work. Doctors, laboratory workers, sanitary inspectors, and visiting nurses have constituted the staff. There are peculiar difficulties to be overcome, but already the evidences of popular appreciation are

unmistakable. Other areas in Peking are demanding health centers, and the plan is being urged in Shanghai and Harbin.

The initiative in this experiment came from the department of hygiene in the Medical College, which is using the center for the training of students of both medicine and nursing. Just as the hospital provides practical experience in medicine, surgery, and obstetrics, so the health center serves as a clinic for training in hygiene and public health. The results so far have been significant and satisfactory. It may well be that this development in Peking will offer useful suggestions for the improvement of teaching methods in medical schools of the West.

In addition to maintaining the Peking Union Medical College, the Foundation, through its China Medical Board, aided two medical schools, contributed to the development of physics, chemistry, and biology in eleven colleges, shared the expenses of a summer institute for science teachers, and made grants to seventeen mission hospitals and to the China Medical Association.

Working with the British Commonwealth

From London and the British Isles as the center of a common culture, political control, financial and commercial activity, educational ideas, social prestige, and family ties, radiate

influences to every quarter of the globe. With the growth of a new spirit of more coordinate cooperation among the various parts of the Commonwealth, dependence is gradually yielding to reciprocity. Canada, Australasia, South Africa, India are making not only economic, but cultural, contributions to the common life of the whole group of the homeland, the self-governing dominions, the dependencies, and the crown colonies.

The progress of medical education and public health in the British Isles and in strategic parts of the Commonwealth is of moment to vast areas of the world, to millions of human beings both within and without the borders of the Commonwealth. The Rockefeller Foundation in carrying out a policy of international cooperation has found peculiarly valuable opportunities to aid British undertakings all the way from London and Edinburgh to Hongkong and Sydney.

The program in medical education has centered upon reenforcing the so-called "unit" plan, of British origin, by which certain professors of medicine, surgery, and obstetrics have been put in a position to devote themselves wholly to the care of patients, teaching, and research. Notably at the University College Center in London, the close proximity of university science laboratories, medical school teaching, and hospitals made it seem important to contribute

substantial sums toward new buildings, equipment, and endowment. On a smaller scale funds were given for the aid of the unit plan in St. Thomas's Hospital Medical School, London, in the University of Edinburgh, and in the Welsh National School of Medicine, Cardiff, and for rounding out the resources of certain medical sciences at Oxford and Cambridge. Cooperation outside the British Isles has included general contributions to six Canadian schools and aid, either for "units" or laboratory professorships, in McGill University, Hongkong University, and the King Edward VII College of Medicine at Singapore.

For public health, England has great importance. Its system is one of the oldest and most completely developed in the world. Its influence in all the continents, especially in tropical regions, is strong and noteworthy. The International Health Board of the Foundation early in its history began to work with various British administrations in the West Indies. Later it gave assistance in the Pacific Islands, Australia, the Straits Settlements, Ceylon, and India, and more recently still in Nigeria, the Gold Coast, and Canada. Since the armies of hygienists, far-flung throughout the Commonwealth, are so largely trained at home, it seemed sound policy to assist the British Government in setting up in London, close to the University College

Center, a modern school of hygiene and tropical medicine, the cornerstone of which was laid in July, 1926. It is expected that this institution will become a training and research station not only for British and colonial health officers but for persons from many other nations.

During 1926 the Foundation's aid within the British Commonwealth included: (1) payments to the medical schools of the universities of Oxford, Cambridge, and Edinburgh, to St. Thomas's Hospital Medical School, London; to the Medical School of the University of Montreal, and to the London School of Hygiene and Tropical Medicine; (2) cooperation in health work with thirteen governments in Canada, the West Indies, the Pacific Islands, the Straits Settlements, Ceylon, and India; (3) the sending of forty-eight persons from thirteen Continental European countries to study in Great Britain; (4) the granting of fellowships to thirty persons resident within the Commonwealth to study at home or abroad; (5) provision (through the League of Nations) for visits of thirty-three foreign health officers or engineers to England and Scotland; (6) the inviting of nineteen British or Dominion doctors and nurses to go, as teachers or visitors, to the United States or other countries as guests of the Foundation; (7) the maintenance in Nigeria of a station for the study of

the yellow fever problem on the west coast of Africa. (See page 40.)

The Continent from France to Turkey

It has been already said that no standardized plan of aid to medicine and health can be applied to all countries alike. This is conspicuously true of Europe. Programs necessarily vary with racial traits, historical traditions, political organizations, finances, special needs, national purposes. Since the World War the Foundation has had relations with a majority of Continental countries. In a few it has been able to render considerable aid; in several only a beginning could be made; in still others there was little or no need for cooperation.

In France a special war-time antituberculosis campaign was gradually replaced by a program which in 1926 comprised aid to the medical school in Strasbourg, to a university laboratory in Paris, to two departments in the University of Lyon, to nurse training centers in Lyon and the capital; a contribution to the central health administration; support of a station in Corsica for training malariologists; funds toward local full-time health organizations in three departments; and fellowships for foreign study.

In other Latin countries cooperation was continued. Original plans for control of hookworm

disease in the mines of Spain have developed into a program involving the strengthening of central health services, the beginning of local health organizations, and the training of personnel by study abroad. In Belgium a further gift in addition to a large sum previously appropriated, was made to the University of Brussels for the rebuilding of its medical school on the same site with a new municipal hospital. In Italy support was provided for the work of an antimalaria project on a considerable scale; stipend and supply funds were given to twelve departments in nine universities, and medical journals and books were sent to a number of libraries.

In Germany an emergency program of scholarships, literature, and supplies, to tide young scientists over the period of privation following the World War, is being brought to a close and a substantial sum has been voted to a psychiatric clinic of international importance in Munich. Czechoslovakia offered opportunities for the creation of a new institute of public health, a contribution to a bureau in the Ministry of Health, and participation in a rural health demonstration. Aid was also promised to two nurse training schools.

The notable progress of Yugoslavia in public health organization and service has been furthered by the Foundation, which during 1926

continued aid to institutes of public health in Belgrade and Zagreb, to the hygiene department of the medical school of the University of Zagreb, and to two schools for nurses, and granted a number of fellowships.

In Bulgaria and Rumania it has been possible to do little more than make surveys and studies, supply emergency literature, and provide fellowships for foreign study for future leaders in medical education and public health. This is true also of Turkey whose government has shown keen interest in health progress. A representative of the International Health Board was stationed for a time in Angora. Turkish officials visited several European countries as guests of the Foundation.

Learning More about Hookworms

Hookworm disease has from the outset played a leading rôle in the public health work of the Foundation. The original Hookworm Commission set up in 1909 with funds given by Mr. Rockefeller was in 1913 expanded into the International Health Board and made a part of the Rockefeller Foundation. Even now specific antihookworm work receives substantial support.

During 1926, if one includes surveys, routine control, and training of personnel, this disease was dealt with by the Foundation in Jamaica,

Porto Rico, Mexico, Nicaragua, Guatemala, Panama, Costa Rica, Colombia, Paraguay, Spain, India, Ceylon, Java, Siam, the Seychelles, the Straits Settlements, Sarawak, certain of the South Sea Islands, and at a training and research station in Alabama. The control of this crippling malady is not only important in itself, but it is also a striking and effective means of showing a community what public health work can accomplish. It has been a forerunner of general programs of disease prevention and hygiene.

The nature of the infestation is comparatively simple; it can be explained clearly to the public; the cure is fairly easy and sure; the means of prevention are well known. Tiny worms living in warm moist soil work their way through the skin of bare human feet or legs, are carried in the bloodstream to the lungs, get into the alimentary canal, and finally fixing themselves to the walls of the small intestine become parasites and, in sufficient numbers, produce anemia and other symptoms. These mature worms deposit eggs which pass out and, in appropriate earth, hatch into small worms. Thus the circle of soil pollution, infestation, and reinfestation is maintained.

This circle may be broken by giving a drug which dislodges the parasites, and by providing latrines, the use of which will prevent the pollution of the soil. Simple as this process seems

there has been much to learn about it since control work began. Better and less time-consuming methods of diagnosis have been devised. Cheaper and more effective drugs have been hit upon. It has been found that the harboring of a few worms is a negligible thing, that the disease in many places is essentially one of barefooted childhood, and that when shoes are worn the tiny worms are baffled.

More recently studies of soils carried on largely by experts of the International Health Board or under its auspices have thrown more light on the nature of the hookworm problem. The little worms like a loose sandy earth in which they find protection and can go down for the moisture they must have. In a close-textured soil, like clay, they cannot prosper. Thus the need of control becomes largely a question of geology. The health officer, so far as hookworm disease goes, can safely neglect certain areas because he knows that infestation cannot begin or continue under the given conditions of soil, temperature, and moisture. Other studies have shown a significant relation between the prevalence of hookworm disease and economic conditions. In Florida, for example, the soil and climate are almost uniformly favorable to the development of hookworms, but the actual amount of infestation varies directly with the wealth or poverty

of the population as revealed by per capita tax valuations and other tests. In well-to-do modern communities sanitation and shoes are a protection against hookworm parasites.

Educating native people about hookworms is not always so simple as it seems. Thus the representative of the Foundation in Java reports the incredulity of villagers who could not understand the idea of magnifications. Hookworms looked to them like large snakes. They simply would not believe that one human could harbor hundreds, even thousands, of such things. Then the officer had an idea. He put familiar coins among the worms, photographed them together, and threw the new slides upon the screen. The principle of relativity solved the problem.

Local Health at Home and Abroad

For obvious reasons modern health organizations appeared first in cities. There the demands for sanitation and control of communicable diseases were most insistent. Recently, in the United States especially, the health needs of the rural regions have been pressing upon the attention of the authorities. Urban sickness- and death-rates have fallen relatively more rapidly than those of the countryside. Examinations of school children have disclosed more defects among rural pupils than among their city

contemporaries. Other indications have stressed the importance of giving more heed to village and farm folk. Much the same state of things is to be found in many countries of Europe, Central and South America, and the Far East.

The antihookworm campaigns of the Foundation's Health Board in the Southern States led naturally to the development of the full-time county health organization with an average annual budget of $10,000, and with a health officer, a sanitary inspector, a visiting nurse, and an office clerk as a minimum staff. Since 1916 the number of such county units in the United States has increased from fifteen to 329. During 1926 the Foundation contributed on the average about 16 per cent of the whole to the budgets of eighty-four of these organizations, under a plan by which contributions annually decrease until the entire project is maintained by local and state funds.

Mention has already been made of similar cooperation in other countries. There, too, local health organizations have begun to spring up in response to local needs. With many of these the Foundation has cooperated, not by seeking to impose an American plan upon a foreign community but by helping to apply certain principles to an often quite different situation. During 1926 this program provided aid to seventeen areas in two states of Brazil, to

three departments in France, to three districts in Poland, to one each in Czechoslovakia, Austria, Hungary, Porto Rico, Ceylon, Siam, the Straits Settlements, and the Madras Presidency in India. The province of Quebec in Canada also established three county health units with the aid of the Foundation.

Field stations for the training of health officers in the practical work of rural administration, including the control of hookworm disease and malaria, were maintained in Alabama, North Carolina, Georgia, Corsica, and Poland, some in connection with local health demonstrations.

Yellow Fever Shows Fight

It seems odd that fleeing rebels, pursued by loyal troops, should upset the plans of yellow fever experts, but this is just what happened last year in Brazil. A systematic attempt, organized by Gorgas in 1918 under Foundation auspices, to put an end to the threat of yellow fever appeared to be reaching its goal in the Americas. Year by year the disease was successfully attacked. It disappeared from Guayaquil in Ecuador; epidemics in Peru and Colombia were promptly controlled; Central America was freed; Mexico took effective action.

In 1923 the Brazilian Government decided to control in the North what it had banished from

the South a dozen years before. The International Health Board accepted an invitation to help with men and funds. Work in coastal cities and towns was pushed to such good purpose that by the end of 1925 success seemed certain. During all that year only three cases were reported, and concerning one of these the doctors were doubtful. But in the summer of 1926, just when victory was to be celebrated, word came of a few cases here and there and then of epidemics in the back country. The unexpected had happened.

To understand what occurred one must have in mind the way in which yellow fever spreads. A female mosquito, the Stegomyia, drawing the blood of a person who is in the early stages of the disease, becomes infected and ten days later can pass on the infective agent to those who have never had the malady. One attack means either death or immunity. The mosquito, a highly domestic creature, deposits her eggs in water containers in or near human dwellings. The eggs hatch into larvae from which the mosquitoes develop. The average time required for this process is about ten days.

The chief methods of combating yellow fever are quite obviously either denying the Stegomyia access to the kind of water she requires or destroying her larvae before they change into adult mosquitoes. A modern piped water-

supply, the surest protection, is often not available in places where yellow fever occurs. Resort must be had to the screening of tanks, to the use of small fish which eat eggs and larvae, to systematic periodic scrutinizing of water containers. An effective method of organization and a technique of control have been worked out. As soon as mosquito breeding has been reduced to a certain minimum the disease cannot spread; it is often described as burning itself out. Non-immune persons may be thought of as fuel, a few infected mosquitoes as sparks from smoldering embers.

What happened in Brazil may be compared to the flaring up of a dying fire when fresh fuel is added. The fever had been controlled in the cities of the coast, but in the back country there were places in which it had not had time to burn itself out. The rebels and troops supplied fresh fuel and the flames sprang up. But control was quickly reestablished, and by the end of 1926 the outlook was again hopeful. Vigilance will be maintained until it seems certain that all danger of another outbreak has passed.

An Outpost in West Africa

Five miles north of Lagos, in Nigeria, on the road to inland towns and cities, is a small settlement. On seven and a half acres are six main

buildings—an office, a laboratory, an animal house, two dormitories, and a staff house. They are of the portable, sectional type, brought from America and set high on pillars of concrete. They are well equipped for scientific work and for living purposes. There is running water and electric light. A tennis court has been

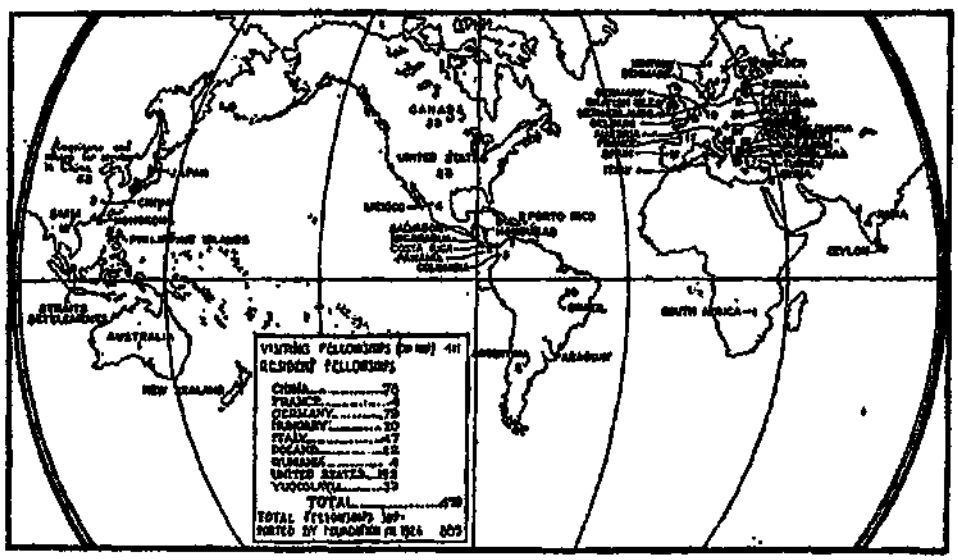


Fig. 6.—Fellowships for forty-eight countries.

laid out. Modest landscape-gardening has been begun. Additional structures for kitchens, servants' quarters, and storage have been built locally. Here live and work expert field directors, clinicians, laboratory men, assistants, and servants. This is the headquarters of the Yellow Fever Commission of the International Health Board of the Rockefeller Foundation.

For some time it has been suspected that the original home of yellow fever might have been

West Africa and that the slave-ships, with mosquitoes breeding in the water-butts, might have carried it to the New World. In 1920 the Foundation sent a temporary commission, originally headed by Gorgas who died in London on the way out, to make a preliminary survey. It was on the recommendation of this group that the present staff has taken up quarters for a thorough study of the yellow fever problem on the West Coast.

Hardly had the present commission been installed in its quarters when reports of yellow fever began to come in from nearby places and from distant points. The small number of the staff, the highly technical laboratory procedures, the long distances between communities, the lack of transportation restricted investigations to cases in Nigeria and on the Gold Coast. The results of these studies raised many questions.

Work will be carried on patiently, carefully, persistently, with the hope of laying a scientific basis for a superstructure of practical control. That the latter will be attended with enormous difficulties can already be foreseen. The vastness of the area, the primitive conditions of travel, the suspicions and the superstitious traits of the population, the lack of trained personnel, the absence of centralized control, the high costs to colonial administrations will

offer serious if not insuperable obstacles. While the Foundation will spare no effort to bring to light the scientific facts and will be willing to cooperate with governments in exploring the possibilities of control under African conditions, it cannot, of course, assume a preponderant part of the burden of a large-scale campaign.

Infanticide of Malaria Mosquitoes

Unlike the home-loving Stegomyia, the Anopheles which carries malaria is a confirmed gadabout. She deposits her eggs at a distance in slowly running streams, in backwaters full of vegetation, along the edges of lakes, in ponds, in standing pools by country well-heads. She can even make her way between large stones to underlying ground-water. Then too there are more than a hundred kinds of these anophelines with very different breeding habits and powers of flight. From these facts one can easily see that malaria control is far from simple. Each locality must be patiently studied to find out what kind or kinds of anophelines are guilty, where and how they are breeding, how far they are flying, what blood meals they prefer—animal or human.

The methods of combating malaria are all based upon the idea of breaking the circuit between the person with malaria germs in his

blood, the infected and infecting mosquito, and the non-malarial individual. Fortunately quinine properly and persistently taken will usually cure the carrier. Efficient screening of houses offers a good deal of protection. Strategically placed pigsties and horse- or cow-barns will deflect a great many anophelines from near-by houses. But valuable as these methods are and indispensable as quinine is in the early stages of control, the surest protection lies in preventing the breeding of anophelines.

For this several plans have been tried. Minnows placed in stockponds, pools, and lakes will eat the larvae or "wigglers." A film of oil on the surface of water will kill them. Drainage on a large scale often rids a whole area of the disease. Minor ditching insures the rapid flowing of surface water and removes the danger from stagnant pools. The filling of low marshy ground is also useful.

Of late the dusting of breeding-places with a powder composed of one part of Paris green (known in Europe as Schweinfurth green) and 100 parts of sifted road dust has proved simple, cheap, and remarkably effective. Originating with the United States Public Health Service, this plan has been tried in Europe with the aid of the Foundation. In Italy a semi-official station for combating malaria was helped to test

the method, at first in two towns in Calabria and Sardinia and later during 1926 in seven other places. The results are gratifying and seem to show that the control of mosquito breeding is of fundamental importance in malaria prevention. Besides aiding the Italian projects, the Foundation during 1926 contributed to malaria programs of control or survey in nine states of the United States, continued cooperation with Porto Rico and Brazil, began work in Argentina, made surveys and started control measures in the province of Caceres, Spain, lent an engineer for drainage projects in Palestine, made further tests of control methods and costs in the Philippine Islands, opened a new research and training station for malaria workers at Edenton, North Carolina, continued aid to other stations in Italy, Corsica, and Alabama, and gave funds for malaria research at two American universities.

The Health of the Mind

Today both medicine and public health are having problems of mental disorders forced upon their attention. Too long have these vital interests been wholly neglected or left to conventional handling, to gifts of personality in physicians, to exploitation by cults, fanatics, or charlatans. But changes are coming about rapidly.

During recent years the care and treatment of the insane have been put upon a new basis.

More intelligent methods for dealing with the feeble-minded have been worked out. The better penal institutions rely more and more upon psychiatrists for the mental examination of prisoners. Juvenile courts of the more progressive type count upon the services of similar experts.

From the more obviously defective or abnormal, the movement has gone on to include behavior- or habit-clinics for young children, special classes for backward school pupils, and work among adolescents and adults who are victims of various nervous and mental disorders. Of late, college students have been receiving attention. In a number of university centers there are now psychiatrists, psychologists, and mental hygienists who are looking after undergraduates. These young people get upset in many ways: some cannot study, others become bashful and retiring, still others grow morbid and sulky, a few develop bullying habits. A number of students, the pride of fond parents and the heroes of small towns, suffer acutely from a feeling of inferiority and failure in a large university setting. It is the task of the mental specialist to interpret to the student his behavior and to show him how he is concealing from himself facts he ought to face; in short to help him to get adjusted to his new life.

A beginning is being made in doing something of the same sort in industry. Robert Owen, in his famous experiments in his New Lanark Mills, tried some rather quaint ways of interesting and stimulating his workmen. The growth of modern large-scale industry has brought to light many problems of adjustment among the labor forces. Studies and experiments by specialists in psychology and mental hygiene are at any rate suggesting significant possibilities in this field.

With respect to mental diseases the tendency has been away from preoccupation with cure to an interest in prevention. The name mental hygiene has been given to the knowledge and technique by which to an increasing extent early habits may be controlled, delinquency forestalled, abnormalities of behavior and attitude corrected, even many forms of insanity avoided. Mental hygiene, as its scientific basis becomes more secure and its methods increasingly efficient, may be expected to take its place in a well-rounded program of preventive medicine and public health.

For a number of years the Foundation has contributed to the budget of the National Committee for Mental Hygiene. This aid was continued during 1926 and included funds for fellowships for the training of personnel. Gifts

were also made to the Canadian National Committee which is conducting a special study of school children and is granting fellowships for advanced students.

Aiding the Science of Life

Biology is not only a premedical science and as such of interest to the Foundation, but it is a general science underlying all the forces of body, mind, and social organization. Both for its value to medicine and because of its wider significance the Foundation has aided many undertakings in this field, which has been broadly interpreted.

In 1926 an Institute of Biological Research was supported at the Johns Hopkins University. One of the chief studies of the institute deals with the possible extension of the span of human life. Another rather fascinating undertaking which received aid was a research at Yale University upon the behavior, and chiefly the self-education, of four young chimpanzees whose powers of problem solving were tested and developed by the use of many ingenious devices.

The Foundation also made contributions toward the buildings and endowment of the Marine Biological Station at Pacific Grove, California, and aided the National Research Council of Australia in its plans to develop anthropology in the universities and to make investigations

of rapidly disappearing remnants of the Australian aborigines. In connection with these activities a director of the Foundation and two American professors made surveys in the chief countries of the Pacific region.

Other items in the biological program were: the bringing of a commission of three Japanese biologists to the United States as guests of the Foundation, the continued support of an international journal of abstracts of biological literature issued under the joint auspices of eighteen scientific societies of America, and a gift of funds for fellowships in biology which were administered by the National Research Council.

The League of Nations and the Foundation

The Covenant of the League of Nations, which went into effect January 20, 1920, provided for the establishment of an international health organization within the League. Such an organization was formed, consisting of three distinct branches: a Consultative Council, a Permanent Health Committee, and a Health Section in the secretarial headquarters at Geneva. Distinguished health authorities from various countries were appointed to the Health Committee. Americans as individuals have been members of this group.

The chief functions of the Health Organization are: to advise the League about health interests;

to bring the health authorities of different countries into closer relations; to hasten the interchange of information concerning communicable diseases which call for immediate precautions, and to simplify concerted methods of control; to bring about international agreements, on such matters, for example, as sanitary codes, suggesting revisions thereof and gathering the facts about fulfilment; to cooperate with the International Labor Office in questions which affect industrial hygiene; to confer and work with the Red Cross Society and other similar associations; and to organize special missions to study certain diseases or procedures which create international health problems, for instance, malaria and its control, or the standardizing of vaccines and sera.

Since 1922 the Rockefeller Foundation in accordance with its policy of working with governmental agencies has contributed to certain features of the League's health program, namely, (1) the service which gathers and distributes information about communicable diseases (Epidemiological Intelligence Service) through the central office in Geneva and an Eastern bureau in Singapore, (2) an international interchange of public health personnel, and (3) a plan for training government health officials in improved methods of collecting and tabulating vital and public health statistics. The Foundation's

contribution to the League's health budget in 1926 was $153,840, or 65.2 per cent of the whole.

International Free Trade in Ideas

"We maintain a trade," says the expositor of Bacon's Utopia, *The New Atlantis*, "not for gold, silver, or jewels, nor for silks, nor for spices, nor any other commodity of matter; but only for God's first creature, which was light; to have light, I say, of the growth of all parts of the world."

This philosophy of commercial isolation has a strange sound in an economically integrated world, but the ideal of a trade in knowledge is being more and more effectively realized. The Rockefeller Foundation in its chosen fields is doing what it can to promote exchange of scientific knowledge, of administrative technique, and of ideas of cooperation, by aiding individuals to study or visit in countries other than their own and by distributing ideas through the printed page.

During 1926 the Foundation provided, either directly or through other agencies, fellowships for 889 persons from forty-eight different countries. Of these 386 crossed national boundaries to pursue their studies. Commissions, nine persons in all, from France, Turkey, and Japan, traveled beyond their own frontiers as guests of the Foundation. Thirty-eight others, as visiting professors, medical school architects, or special

investigators, made similar journeys. Officers of the Foundation made visits or surveys in more than a score of countries in Europe, South America, the Far East, and Australasia.

In the same year were issued under the auspices of the Division of Medical Education the Fourth and Fifth Series of a bulletin entitled "Methods and Problems of Medical Education." One of these describes the case record system of the Presbyterian Hospital in New York and reproduces in facsimile the complete history of the diagnosis and treatment of one individual patient. The other bulletin, profusely illustrated with photographic reproductions and floor plans, contains authoritative descriptions of the buildings, equipment, organization, and methods of departments or institutes in thirteen medical centers in five countries. These bulletins are sent without charge to all the medical schools throughout the world and to especially interested individuals and enquirers. Thus the leaders of any country may be currently informed of progress in other lands.

Mention has already been made (page 49) of the journal, *Biological Abstracts*, which plans to issue 3,500 pages and a copious index annually with aid from the Foundation, and also (page 7) of the emergency service, now being brought gradually to an end, by which scientific, medical,

and public health literature was sent during the year to libraries in twenty different countries.

Consultation and Field Service

Wherever possible the Rockefeller Foundation works through agencies already established. Frequently the machinery for a given piece of work is already set up, but in order that it may function efficiently slight monetary assistance or technical counsel is needed. Bearing this in mind, the Rockefeller Foundation in 1926 continued its policy of aiding established agencies either financially or through the cooperation of experts qualified to make surveys and give advice.

In the United States during 1926 aid was given to departments of epidemiology in eleven states. Six states of the United States and five countries in Central and South America were assisted in strengthening their sanitary engineering services. Aid was furnished to public health laboratory services in three countries of Central America, in Colombia, in China, and in nine states of the United States; and assistance was given to vital statistics departments of Denmark and of seven of our own states.

It is considered especially helpful to supply aid to advisory bureaus for studying or organizing national health services, on the principle that in work of this sort a right start means everything.

Some of the agencies aided during the year were the National Office of Social Hygiene, France; the Division for Study and Reform of Public Health Activities, Czechoslovakia; the Sanitary Reform Bureau of Hungary; and the Advisory Board of the Polish Public Health Service.

In the countries of Costa Rica and Salvador the work in connection with hookworm campaigns was merely of a supervisory and advisory nature. Similarly, Nicaragua and Salvador were served with expert advice on malaria problems.

Various study and survey trips were made during 1926 by the officials of the Foundation. Preliminary studies of the state of medical education were carried out in Bolivia, Haiti, India, and Peru by officers of the Division of Medical Education. Visits in connection with projected or existing programs were made in Austria, China, England, France, Germany, Hongkong, Hungary, Italy, Japan, Korea, the Philippine Islands, Rumania, Scotland, Siam, Straits Settlements, and Yugoslavia. The Director of the Division of Studies, accompanied by scientists distinguished in the fields of anthropology and biology, visited Australia, Japan, China, and Hawaii to investigate possible fields for studies in human biology, and England, Scotland, and France to determine the status of these sciences there. The Director of the International Health

Board investigated problems in Canada and Brazil. The President of the Foundation made visits of inspection to Canada, Austria, France, England, Italy, and Yugoslavia.

Working with Other Agencies

The agencies with which the Rockefeller Foundation cooperates are not necessarily always a part of government machinery. Certain well-established semi-governmental or voluntary agencies with definite fields of activity, certain committees undertaking to do specialized work, and certain private institutions working largely in public health fields received aid in 1926. Among these were the following:

Medical Research Council (Great Britain). Fellowships in medicine.

The National Research Council. Fellowships in mathematics, medicine, physics, chemistry, and the biological sciences; contribution towards current expenses of Concilium Bibliographicum.

Union of American Biological Societies. Editorial expenses in connection with publication of *Biological Abstracts.*

New York Committee on Dispensary Development. Aid in its general program.

American Conference on Hospital Service. Payment toward maintenance of Hospital Library and Service Bureau.

National Committee for Mental Hygiene. Survey of care and treatment of mental deficiency and mental diseases; general expenses; fellowships.

Canadian National Committee for Mental Hygiene. Studies in the application of mental hygiene to school children.

New York Academy of Medicine. Aid toward expenses of reorganization and expansion program.

American Medical Association. Contribution toward deficit on publication of the Spanish edition of the *Journal of the American Medical Association.*

Council on Health Education (China). General budget.

China Medical Association. Current expenses; maintenance of standards of medical education.

Commission on Medical Education. Contribution toward study of the medical curriculum in America.

National Committee for the Prevention of Tuberculosis (France). Aid toward general expenses.

The Healing of the Nations

There are incorrigibly hopeful people who hail science as a means of social salvation. Forgetting what happened only the other day they look forward confidently to a world saved from want and disease and unified by a spirit of brotherhood and good will. How different the outlook of

another group who see in indiscriminate medical care and the prevention of disease only the thwarting of natural selection by the preservation of the unfit, the handicapping of superior races, and the hastening of war through over-population!

Between the greeters of the millennium and the prophets of disaster are to be found those who carry on by taking what seems to be the wisest next step. While the "fit" are being defined and the superior races determined, these pragmatic folk try to gain more scientific knowledge, to relieve suffering, to control communicable diseases which threaten both the superior and the inferior, to diffuse information about health with the faith that nationally and individually the fit are likely to profit by it and the unfit to give little heed.

Quite frankly taking this middle course, the Rockefeller Foundation seeks to increase and distribute knowledge, to promote organization nationally and internationally, to improve professional efficiency, to deepen a sense of comradeship in science and thus to further its chartered aim, "the well-being of mankind throughout the world."

Applications for Aid

In the course of the year the Foundation was forced to decline 514 of the formal applications

for aid which it received, inasmuch as the type of assistance requested therein did not fall within the scope of the activities of the organization as determined by its present policies. The Foundation does not make gifts or loans to individuals, nor contribute to the building or maintenance of churches, hospitals (except as certain hospital features may be included in plans for medical education), or other local institutions, nor support campaigns to influence public opinion on social or political questions.

The applications declined during 1926 may be classified under the following headings: public health 16, medical education 112, general education 36, local institutions 100, personal aid 173, miscellaneous 77. This list does not include the many tentative requests for cooperation made to the central office or to staff officers in the field.

Finances for 1926

In the following financial statement is presented a summary of the receipts and expenditures of the Rockefeller Foundation in 1926. The income accruing from investments was $9,075,022; the balance carried over from 1925 was $6,743,134. Of these total funds, $9,741,474 was needed to meet the obligations which came due during the year and $4,200,284 was subject to call in fulfilment of outstanding pledges. The

remainder available for transfer to the 1927 budget and subject to appropriations for that year was $1,876,398. Details of expenditure for 1926 will be found on pages 71 to 73. A more complete financial statement appears in the Treasurer's Report, pages 371 to 438.

RECEIPTS AND DISBURSMENTS IN 1926

Receipts		*Disbursements*	
Balance from 1925 (including refunds during 1926 on prior year appropriations)	$6,743,134	General Budget:	
Income during 1926	9,075,022	International Health Board	$2,516,758
		China Medical Board	1,412,109
		Division of Medical Education	674,294
		Division of Studies	759,162
		Central Administration	152,737
		Capital Expenditures:	
		International Health Board	1,567,688
		China Medical Board	61,164
		Division of Medical Education	2,597,562
			$9,741,474
		Balance:	
		Payable on 1926 and prior appropriations. $4,200,284	
		Available for 1927 appropriations. 1,876,398	6,076,682
	$15,818,156		$15,818,156

THE ROCKEFELLER FOUNDATION

Report of the Secretary

To the President of the Rockefeller Foundation:
Sir:

I have the honor to submit herewith my report for the period January 1, 1926, to December 31, 1926.

Respectfully yours,

NORMA S. THOMPSON

Secretary

SECRETARY'S REPORT

The following were members and trustees of the Rockefeller Foundation during 1926:

MEMBERS

John G. Agar [2]	John D. Rockefeller, Jr.
Wallace Buttrick [1-2]	Wickliffe Rose [2]
John W. Davis	Julius Rosenwald
Simon Flexner	Martin A. Ryerson
Raymond B. Fosdick [2]	Frederick Strauss
Charles E. Hughes	George E. Vincent [2]
Vernon Kellogg [2]	William Allen White

Ray Lyman Wilbur

Officers of the Rockefeller Foundation during 1926 were:

John D. Rockefeller, Jr.	*Chairman, Board of Trustees*
George E. Vincent	*President*
Norma S. Thompson	*Secretary*
Louis G. Myers	*Treasurer*
George J. Beal	*Comptroller*

Departmental Organization

The programs of the Foundation were carried out during 1926 by two boards and two divisions created by resolution of the Board of Trustees, the International Health Board in 1913, the China Medical Board in 1914, the Division of Medical Education in 1919, and the Division of Studies in 1923. Each of these agencies was devoted to special functions and depended upon the Foundation for funds.

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[1] Died May 27, 1926.
[2] Executive Committee.

DR. WALLACE BUTTRICK

The Rev. Dr. Wallace Buttrick, distinguished educator, chairman and former president of the General Education Board, and member for many years of the Rockefeller Foundation, the International Health Board, and the China Medical Board, died at the Johns Hopkins Hospital, Baltimore, May 27, 1926, following a stroke. He had entered the hospital three days before for an eye examination.

Wallace Buttrick was born at Potsdam, New York, October 23, 1853. He attended the Ogdensburg Academy and the Potsdam Normal School between 1868 and 1872. On December 1, 1875, he married Isabella Allen of Saginaw, Michigan. In 1883 he was graduated from the Rochester Theological Seminary and, in the same year, became pastor of the First Baptist Church at New Haven. His subsequent pastorates were at St. Paul, Minnesota, 1889–1892, and at Albany, New York, 1892–1902, whence he was called to become secretary and executive officer of the General Education Board, of which in 1917 he was made president. Meantime, in 1914, he had been chosen as director of the China Medical Board and had initiated the work of that organization. He was also a trustee of the Rockefeller Foundation and member of the International Health Board from 1917 on, and member of the China Medical Board and of the International Education Board from the time these agencies were established.

As an executive Dr. Buttrick combined the highest ideals and the most intense seriousness with an engaging informality, a delightful sense of fun, and a singularly human interest in the personal welfare of every member of his staff. He possessed, as few leaders possess, the peculiar gift of stimulating his associates, putting them at their ease, throwing responsibility upon them, encouraging and developing initiative, and at the same time of knowing somehow all that was going on in the field as well as in the office. He was self-effacing, modest, kind, wise, and yet so shrewd and sagacious that his comments even on subjects with which he was unfamiliar were not to be ignored. He had a striking ability rapidly to get at the heart of new problems which arose in the Boards as, under his cautious control, their scope extended. By these characteristics and by other qualities, not easy to define but none the less effective, Wallace Buttrick won and held the admiration, confidence, and affectionate loyalty of all who were associated with him.

The abilities, aptitudes, and spirit which made Dr. Buttrick a successful executive also qualified him in an exceptional way to serve as a trustee. In all of the Boards of which he was a member his wide experience and large store of knowledge, his ripe wisdom, his broad sympathy saved from sentimentality by a wholesome sense of humor, and his loyalty to the best standards of education and public policy were highly valued and were steadily influential.

Photograph Excised Here

Dr. Wallace Buttrick

The officers and members of these departmental agencies in 1926 were as follows:

INTERNATIONAL HEALTH BOARD

George E. Vincent, *Chairman*

Wallace Buttrick [1]	Edwin O. Jordan
Rufus Cole	Vernon Kellogg
David L. Edsall	John D. Rockefeller, Jr.
John G. FitzGerald	Wickliffe Rose
Simon Flexner	Victor C. Vaughan
Raymond B. Fosdick	William H. Welch

Norma S. Thompson, *Secretary*

Frederick F. Russell, M.D.	*General Director*
John A. Ferrell, M.D.	*Director for the United States*
Victor G. Heiser, M.D.	*Director for the East*
Hector H. Howard, M.D.	*Director for the West Indies*
Wilbur A. Sawyer, M.D.	*Director of Public Health Laboratory Service*

Florence M. Read, *Executive Secretary*

CHINA MEDICAL BOARD

George E. Vincent, *Chairman*

Wallace Buttrick [1]	Paul Monroe
Simon Flexner	John R. Mott
Raymond B. Fosdick	Francis W. Peabody
Frederick L. Gates	John D. Rockefeller, Jr.
Frank J. Goodnow	Wickliffe Rose
Vernon Kellogg	William H. Welch

Norma S. Thompson, *Secretary*

Roger S. Greene	*General Director*
Henry S. Houghton	*Acting Resident Director in China*
N. Gist Gee	*Assistant Resident Director in China*
L. Carrington Goodrich	*Assistant Resident Director in China*

Margery K. Eggleston, *Executive Secretary*

DIVISION OF MEDICAL EDUCATION

Richard M. Pearce, M.D.	*Director*
Alan Gregg, M.D.	*Associate Director*
William S. Carter, M.D.	*Associate Director*
F. W. O'Connor, M.R.C.S. (England)	*Assistant*
Daniel P. O'Brien, M.D.	*Assistant*

[1] Died May 27, 1926.

DIVISION OF STUDIES

Edwin R. Embree	*Director*
F. W. O'Connor, M.R.C.S. (England)	*Assistant*
Earl F. Zinn	*Assistant*

Meetings

Regular meetings of the Rockefeller Foundation were held on February 24, May 26, and November 5, 1926. Fourteen meetings of the Executive Committee were held during the intervals between the regular meetings, to execute programs within general policies approved by the trustees.

Summary of Expenditures

The following summary of payments made by the Rockefeller Foundation for all purposes during the year 1926 outlines in expenditures the work described in terms of aims and results in the President's Review. In many instances payments involved sums appropriated in former years. On the other hand, in some instances payments represent but a portion of appropriations made during 1926, remainders of which will be paid during succeeding years. A full statement of the finances of the Foundation will be found in the report of the Treasurer, pages 371 to 438.

SUMMARY OF THE EXPENDITURES OF THE ROCKEFELLER FOUNDATION FOR THE YEAR 1926

I. PUBLIC HEALTH

International Health Board

1. Regular program in control of hookworm infection, malaria, yellow fever, and in county health work, state health and laboratory services, public health administration, and public health nursing	$1,948,381
2. Tuberculosis in France	6,725
3. Public health education	
(a) Fellowships	274,613
(b) Schools and institutes of hygiene and public health	
(1) London School of Hygiene and Tropical Medicine	689,629
(2) State Institute of Public Health, Prague	239,959
(3) School of Hygiene and Public Health, University of Toronto	162,500
(4) Institute of Hygiene, Budapest	140,000
(5) School of Public Health, Zagreb, Yugoslavia	88,400
(6) Institute of Hygiene, Oslo, Norway	86,050
(7) State Serum Institute, Copenhagen	54,192
(8) Institute of Hygiene, São Paulo	51,074
(9) Harvard School of Public Health	25,000
(10) Imperial College of Tropical Agriculture, Trinidad	4,885
(11) School of Hygiene, Warsaw	4,680
(12) Department of Hygiene and Legal Medicine of the Medical Faculty of Bahia	46
(c) Schools of nursing	
Rio de Janeiro, Brazil	30,173
(d) Study and training courses and travel of visiting scientists	49,569
4. Administration	228,570
	$4,084,446

II. MEDICAL EDUCATION

A. China Medical Board

1. Peking Union Medical College	
(a) Land, buildings, and equipment	$61,164
(b) Operation (Oct. 1, 1925, to Oct. 31, 1926)	994,089
2. Aid to medical and premedical schools and to hospitals	300,468
3. Fellowships and scholarships	53,155
4. Administration	64,397

B. Division of Medical Education

1. Medical schools and other institutions	
(a) Columbia University	$1,000,000
(b) University of Brussels	848,314
(c) University of Cambridge	241,921
(d) State University of Iowa	225,000
(e) Chulalongkorn University, Siam	96,661
(f) Central Europe: Journals and apparatus	95,601
(g) University of Oxford	87,400
(h) St. Thomas's Hospital, London	72,900
(i) New York Academy of Medicine: Educational program	45,916
(j) American University of Beirut	43,000
(k) University of Strasbourg	37,620
(l) University of Edinburgh	31,935
(m) University of Montreal	25,000
(n) Faculty of Medicine, São Paulo	7,073
(o) University of Paris	3,232
2. Visiting commissions and professors, surveys, and publications	25,746
3. Fellowships for medical scientists	282,730
4. American Medical Association: Toward publishing a Spanish edition of its Journal	7,493
5. Field staff	28,948
6. Administration	65,366
	$4,745,129

III. MISCELLANEOUS

Division of Studies

1. Biology	
(a) Mental hygiene	$56,247
(b) National Research Council:	
Research fellowships in biological sciences	64,473
Biological Abstracts	40,541
(c) State University of Iowa: Research in physiology of the brain	30,000
(d) The Johns Hopkins University: Biological research	33,000
(e) Yale University: Promotion of anthropoid research	10,000
(f) Fellowships	19,979
(g) Australian National Research Council: Anthropological studies	13,318
(h) Marine Biological Station at Pacific Grove	50,000
(i) Travel of visiting scientists; surveys; equipment	19,423
2. Nursing education	173,461
3. Fellowships in physics, chemistry, and mathematics	117,836
4. Hospital and dispensary service	74,804

5. Concilium Bibliographicum	$5,000
6. Administration	51,080
	$759,162

IV. ADMINISTRATION

A. Maintenance of executive offices, the Treasurer's office, and the European office	$148,143
B. Furniture, fixtures, books	4,594
	$152,737
	$9,741,474

Funds and Property

As of December 31, 1926

PRINCIPAL FUND

Book value as at December 31, 1925	$165,204,624
Transferred during 1926 from Special Fund	77,000
	$165,281,624

LANDS, BUILDINGS, AND EQUIPMENT

In China: Medical school lands, buildings, and equipment	$8,991,753	
In New York: Furniture and equipment of offices	47,740	
		$9,039,493

UNDISBURSED INCOME

General Income (for offsetting liabilities, see below)	$6,076,682

UNPAID APPROPRIATIONS AND PLEDGES

Balance due on appropriations payable in 1926 and prior years		$4,200,284
Appropriations and pledges which become effective in 1927 and following years:		
1927	$9,173,307	
1928	2,614,489	
1929	2,278,504	
1930	1,085,293	
1931	348,495	
1932	60,000	
		15,560,088
		$19,760,372

INTERNATIONAL HEALTH BOARD

Report of the General Director

INTERNATIONAL HEALTH BOARD

Report of the General Director

To the President of the Rockefeller Foundation:

Sir:

I have the honor to submit herewith the report of the International Health Board for the period January 1, 1926, to December 31, 1926.

Respectfully yours,

FREDERICK F. RUSSELL
General Director

INTERNATIONAL HEALTH BOARD

OFFICERS AND MEMBERS

GEORGE E. VINCENT, *Chairman*
FREDERICK F. RUSSELL, *General Director*
JOHN G. AGAR
WALLACE BUTTRICK[1]
RUFUS COLE
DAVID L. EDSALL
JOHN G. FITZGERALD
SIMON FLEXNER
RAYMOND B. FOSDICK
EDWIN O. JORDAN
VERNON KELLOGG
JOHN D. ROCKEFELLER, JR.
WICKLIFFE ROSE
VICTOR C. VAUGHAN
WILLIAM H. WELCH

NORMA S. THOMPSON, *Secretary*
FLORENCE M. READ, *Executive Secretary*

[1] Died May 27, 1926.

PERSONNEL OF STAFFS DURING 1926[1]

ADMINISTRATIVE STAFF

FREDERICK F. RUSSELL, M.D., *General Director*
JOHN A. FERRELL, M.D., *Director for the United States*
VICTOR G. HEISER, M.D., *Director for the East*
HECTOR H. HOWARD, M.D., *Director for the West Indies*
WILBUR A. SAWYER, M.D., *Director of Public Health Laboratory Service*
NORMA S. THOMPSON, *Secretary*
FLORENCE M. READ, *Executive Secretary*

FIELD STAFF[2]

ARGENTINA
N. C. DAVIS

BRAZIL
G. K. STRODE
J. H. JANNEY, JR.
ETHEL PARSONS[3]
J. H. WHITE[3]
M. E. CONNOR
E. J. SCANNELL[3] (resigned)
G. J. CARR[3] (resigned)
L. C. SMITH[3]
R. A. HENRY[3]
A. W. BURKE[3]
J. AUSTIN KERR
A. W. FREEMAN[3]
J. A. DOULL[3]

CEYLON
W. P. JACOCKS

CHINA
J. B. GRANT

COLOMBIA
D. B. WILSON

CUBA
M. E. CONNOR

EUROPE
S. M. GUNN
GEORGE BEVIER (Austria)
W. LELAND MITCHELL (Czechoslovakia, Hungary, Yugoslavia)
R. K. COLLINS (Bulgaria, Turkey)
FRANK MILAM (Poland)
R. M. TAYLOR (France)
C. A. BAILEY (Spain)

GUATEMALA
J. E. ELMENDORF, JR.
M. E. CONNOR

HAITI
G. C. PAYNE
W. A. HOFFMAN[3] (resigned)

---

[1] Personnel employed by government in cooperative work not listed.
[2] Names are listed under each country in which the staff members served for any part of the year
[3] Special staff member.

HONDURAS
F. E. Hulse [1]
M. E. Connor

INDIA
J. F. Kendrick

ITALY
L. W. Hackett
N. H. Rector [1]

JAMAICA
B. E. Washburn

JAVA
J. L. Hydrick

MEXICO
A. J. Warren
H. P. Carr
M. E. Connor

NICARAGUA
D. M. Molloy
E. H. Magoon [1]

PALESTINE
J. C. Carter [1]

PANAMA
Louis Schapiro
M. E. Connor

PARAGUAY
F. L. Soper
E. R. Rickard

PHILIPPINE ISLANDS
J. J. Mieldazis [1]
Frank Milam

PORTO RICO
R. B. Hill
G. C. Payne
W. C. Earle

SARAWAK
M. E. Barnes

SIAM
M. E. Barnes
P. M. Lowell [1] (resigned)
W. A. McIntosh
O. A. G. Reinhard [1]

SOUTH SEA ISLANDS
[Fiji, Tonga, Western Samoa]
S. M. Lambert

STRAITS SETTLEMENTS
M. E. Barnes
P. F. Russell

UNITED STATES

Alabama
C. N. Leach
F. C. Caldwell

Georgia
M. F. Boyd
H. P. Carr
P. S. Carley

North Carolina
H. A. Taylor
M. F. Boyd
H. P. Carr
P. S. Carley

Texas
Hugo Muench, Jr.

At Home Office
P. W. Covington
W. G. Smillie

VENEZUELA
Thorndike Saville [1]
F. M. Bell [1]

WEST AFRICA
Henry Beeuwkes
W. A. Sawyer
Henry Hanson [1]
A. F. Mahaffy
H. R. Muller [1]

[1] Special staff member.

WEST AFRICA (*Cont.*)

A. M. WALCOTT[1]
L. H. DUNN[1]
OSCAR KLOTZ[2]
A. S. PEARSE[1]
J. H. BAUER[1]

STUDY LEAVE

J. E. ELMENDORF, JR.
W. C. HAUSHEER
R. B. HILL
G. K. STRODE
W. C. SWEET
R. M. TAYLOR
A. J. WARREN
C. H. YEAGER

TRAINING STATIONS

M. C. BALFOUR[1]
M. E. BARNES
J. H. BAUER[1]
W. C. EARLE
J. E. ELMENDORF, JR.
R. B. HILL
S. M. LAMBERT
C. H. YEAGER

YELLOW FEVER ADVISORY COUNCIL

HIDEYO NOGUCHI,[2] M.D., Rockefeller Institute for Medical Research
JOSEPH H. WHITE,[1] M.D., Assistant Surgeon General (retired), United States Public Health Service

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[1] Special staff member.
[2] Not a staff member; appointed to serve in an advisory capacity.

INTERNATIONAL HEALTH BOARD

I

Although engaged in many activities on all the continents, and extending its work to the remotest corners of the globe, the International Health Board of the Rockefeller Foundation has maintained a definite and clear-cut policy from which it has not wavered, namely, that its function shall be to promote public health and prevention of disease by assisting governments in the development of their own official public health agencies. There are two chief methods by means of which the Board contributes to the advancement of disease prevention and the betterment of the health of nations: (1) aid to official public health organizations in the development of administrative measures suited to local customs, needs, traditions, and conditions; (2) field research in the epidemiology of disease, thus making possible the application of advanced scientific knowledge in the development of an administrative program.

The diseases that the Board has chosen for special attention have been world-wide in their distribution and of great economic importance. Field research in the epidemiology of hookworm disease has advanced knowledge concerning the

life history of the hookworm, both in its free-living larval form and in its adult relationship to the host, so that we now have a much better understanding of the disease. This knowledge has enabled governmental agencies to delimit the field of control work and to modify the methods of treatment and of prevention to such an extent that the former administrative methods of control have been revolutionized. The results have been extraordinarily successful. At the present time it is fair to say that hookworm disease has almost disappeared from the United States and is rapidly coming under control in many parts of the world. But the great achievement is not the social and economic rehabilitation of the more than six or seven million people who have been treated for the disease during the past ten or fifteen years; it is the development of administrative measures that will prevent millions yet unborn from ever suffering from its ravages.

The story of malaria is unfolding on somewhat similar lines. Control measures are preceded by field research. In the United States a satisfactory method of control was developed for cities and areas with a dense population or high economic status. But these methods could not be applied in scattered rural areas because of the great per capita cost. Further epidemiological and field laboratory studies have indicated that

only one species of anopheline mosquito is responsible for malaria in the Southern States and that this species has a limited seasonal distribution and preferential breeding-places. Utilizing this information, administrative procedures have been developed which confine activities to species control, thus reducing the cost of malaria control to a point where it becomes feasible for a scattered population of low economic status. Similar species-control work is being developed under the Board's field staff in Porto Rico, Argentina, and the Philippine Islands.

Yellow fever control is perhaps the most striking example of an administrative program developed from epidemiological studies. It was one thing to control this disease in any given city, but quite another, and a much more complex and difficult thing, to attempt complete eradication of the infection from a whole continent. Thus, though Gorgas demonstrated that yellow fever control was possible in Habana in 1901, twenty years elapsed before the epidemiological conceptions of Reed, Gorgas, Carter, White, and others—that the extermination of the disease was possible simply through control in key points or endemic foci—made it economically feasible to consider a program of eradication.

The Board has aided governments, at their invitation, by sending trained staff members to

assist in developing their public health plans on a scientific basis. But it has given immeasurably greater aid in enabling governments to train their own personnel to carry out their own tasks. This aid has resulted in the establishment of schools of hygiene and public health, field training stations for technical and subordinate personnel, and public health institutes, thus making it possible for young men and women from all parts of the world to prepare themselves for leadership in the prevention of disease in their own lands.

The results of these various efforts are not immediately demonstrable. It is problematical if, at the present time, concrete data could be obtained showing actual reduction in death-rates as a direct or indirect result of the Board's work. But immediate results are not always the most important ones. The intangible effects of extensive public health education, of gradual improvement in the sanitation of the environment, of the correction of minor physical defects of school children, and of the reduction of communicable diseases are so slowly cumulative that their fullest benefit may be realized only in coming generations.

Summary of Work in the Year 1926

During 1926 the International Health Board took part in public health work of various

kinds in eighty-eight states and countries throughout the world. It assisted governments in yellow fever, hookworm, malaria, and general health surveys; in campaigns for the control of yellow fever and hookworm disease; in field studies in malaria and hookworm disease; in demonstrations of malaria control; in county and district health work; and in the development of essential central divisions of the public health service such as divisions of epidemiology, sanitary engineering, vital statistics, public health laboratories, and public health nursing.

Aid to public health education was of seven types: contributions to schools or institutes of hygiene for land, building, equipment, maintenance, or endowment; assistance to further the teaching of public health in medical and other schools; provision of fellowships for prospective public health workers; arrangement of study trips for government health officials; participation in the support of conferences or special courses of study; support of field training stations; and cooperation in training public health nurses. Fellowships in public health were provided for 253 men and women of thirty-one countries. Provision was made also for sixteen foreign health officials to visit the United States during the year as the guests of the Board to study outstanding public health activities and institutions.

Field training stations for members of the Board's staff, fellows of the Board, and personnel of state boards of health were maintained at Montgomery, Alabama, and at Edenton, North Carolina. Contribution was made toward the support of training stations for malariologists in Italy and in Corsica and toward teaching centers operated in connection with the public health demonstrations in Skierniewice District and the Mokotow District of Warsaw, Poland.

The Board also cooperated with the Health Section of the League of Nations through the contribution of funds toward the support of international interchanges of public health personnel and the improvement of services of epidemiological and public health intelligence.

II

Rural Health Organization

Municipal health organizations have existed for many years in all civilized countries. The principle of full-time service for public health officials in cities has been widely accepted, and the development in administrative methods has kept well abreast of scientific knowledge. But the prevention of disease in rural areas has not kept pace. It had always been assumed that rural life was, *a priori*, a healthful one. It caused no little surprise when official statistics

showed that many large municipalities had a lower infant death-rate than rural districts and also a lower death-rate from communicable diseases, despite the overcrowding, the lack of sunshine and fresh air, and the greater probability of exposure to contagion which is inseparable from city life. With this discovery came the realization that the health of rural people was being neglected.

The methods of disease prevention which were used in municipalities obviously could not be applied directly to rural conditions, though the general principles would be the same. In time a successful and economical program for the protection of the health of rural populations was devised. It embodies full-time efficient health service conducted by officials resident in the area, supervised and subsidized by the central health organizations, but supported in great part from local official sources. The administrative area is usually the local governmental unit, and the scope of the work includes a general well-rounded health program which places special emphasis on educational measures. In the United States, as a rule, the unit is the county; in Porto Rico, Brazil, and the Philippine Islands it is the municipio; in the Straits Settlements it is the district; in France, the department; in Austria, the bezirk. An ideal unit should comprise

an area not greater than 1,000 square miles with a population between fifteen and thirty thousand. The director should be a physician trained in public health methods, understanding local conditions and giving full-time service. There is, necessarily, great elasticity in the number and type of subordinate personnel employed and in the methods and scope of their work.

County Health Work in the United States

Local full-time health service in the United States, with the county as the administrative unit, has passed the experimental stage and is now established on a firm basis. On December 31, 1926, there were 341 county health units scattered through thirty-four states. In the New England states the system of local government is on the township, rather than the county, basis so that it is not a simple matter to establish a local health organization in these states on county lines. Nevertheless, such an organization has been established in Massachusetts, with satisfactory results. Excluding New England, there are only nine states that do not possess some full-time county health units, namely, Nevada, Idaho, North Dakota, Wisconsin, Michigan, Nebraska, Indiana, Delaware, and New Jersey. In most of these states legislation is pending which will give the county governments

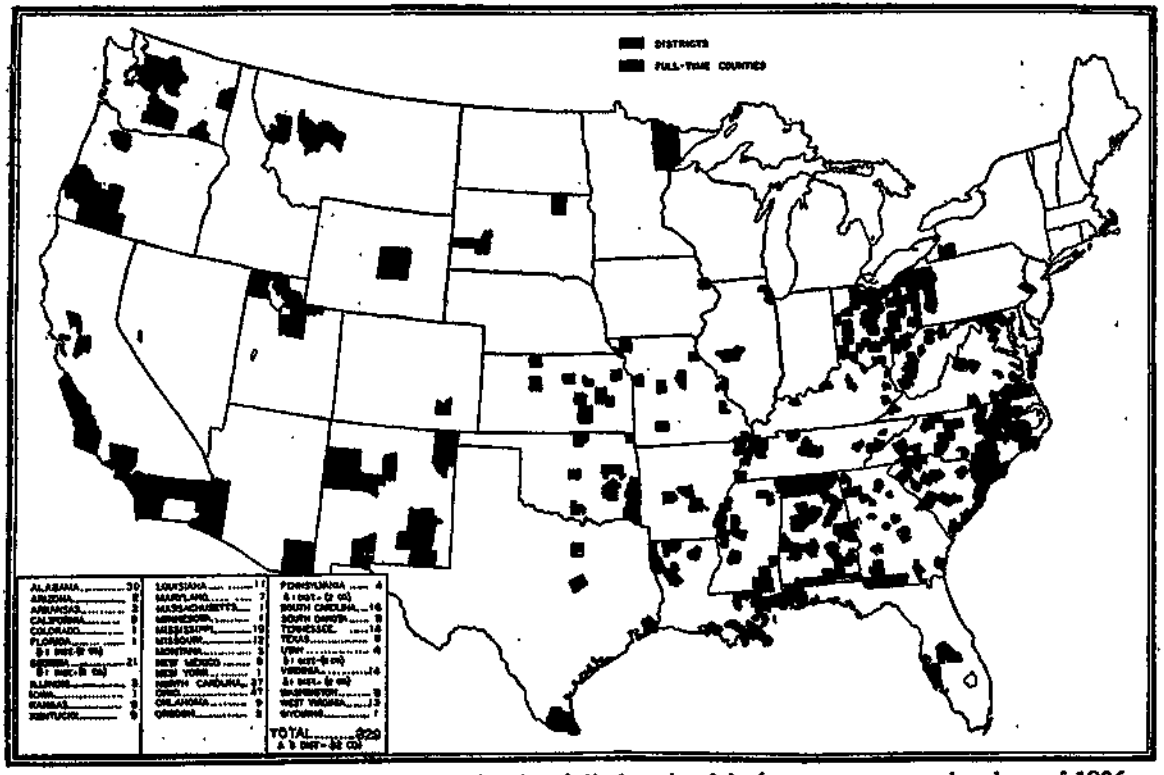


Fig. 8.—Counties in the United States having full-time health departments at the close of 1926.

the necessary permission to organize their health work on a local full-time basis.

The advantages of full-time county health service are so obvious and so outstanding that it

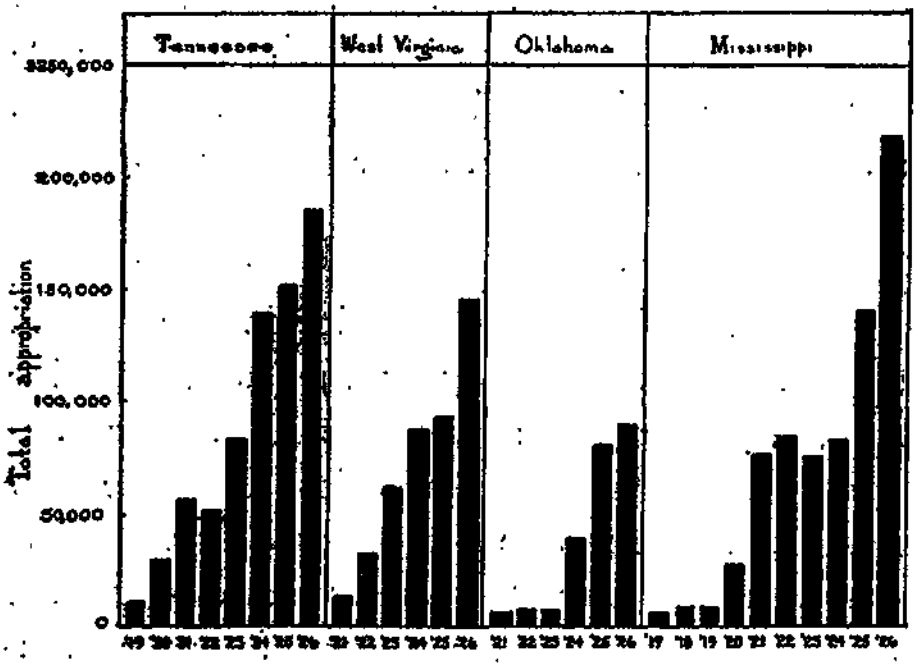


Fig. 9.—Increase in annual county appropriations for full-time health work in four states of the United States during recent years.

is remarkable that this type of health service has so recently been incorporated in our body politic. There is general agreement that it is as much the duty of the Government to protect the physical welfare of the people as to protect property. It is also the duty of Government to assure growing children satisfactory opportunity for physical as well as mental development. Thus county health work should become, and in fact has become in many states, as much a part

of county government as the police system or the county school system. Usually such a health department is directed by a medical officer with public health training, and the local board of health acts in an advisory capacity. This organization is comparable to the school system in most states. The nucleus of workers which is required to carry out the normal functions of a county health unit includes, in addition to the health officer, a public health nurse, a sanitary inspector, and a secretary. This staff may be expanded as, for example, in one county in California which has over a hundred county nurses. In some states the county health officer has supervision over all municipal as well as rural health activities; in others the municipal health authorities are autonomous. The outstanding contribution of county health work has been the development of a health service for smaller towns and rural communities.

The development of full-time local health service depends in large measure upon the interest and support given by the state health department. In some states 30 per cent of the local county health budget is supplied from the state health budget. But in the United States the economic status of a county greatly influences the development of local health work. It has been found that the important factors

affecting the establishment of local health service are total population of a county, accessibility, and per capita income. A county having a population of twenty-five thousand or more, with a density of twenty-five to fifty persons per square mile and an annual per capita income of at least $400, can easily support a standard full-time unit including a minimum personnel of four workers and an annual budget of $10,000.

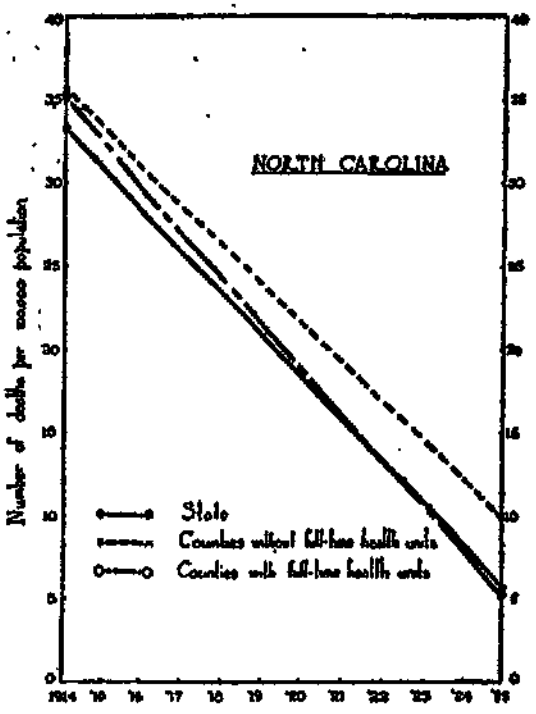


Fig. 10.—Comparative reduction in the typhoid fever death-rate over a period of years for the state of North Carolina, for a group of counties with full-time health organizations, and for a group of similar counties without full-time health organizations.

In sparsely settled areas, however, or in areas with a relatively low standard of living, it has not been found possible to develop a well-rounded full-time service on the usual basis. The state governments are attempting to solve the problem of such localities in a variety of ways: Virginia and Tennessee are testing the plan of full-time local sanitary inspectors in rural counties; several states are sponsoring the plan of part-time health

officers and full-time nurses; others are attempting a district plan whereby two or more poor counties fuse their resources and, with the aid of the state health department, develop an adequate program with a full-time personnel. Utah, Florida, Georgia, Virginia, and Pennsylvania have organizations of the latter type. The significant feature of this work is that the general principle of full-time local health service is accepted as the most efficient method of approach, and it remains only to develop a plan or modify the organization so that it will meet the needs of local health conditions and at the same time not exceed local resources.

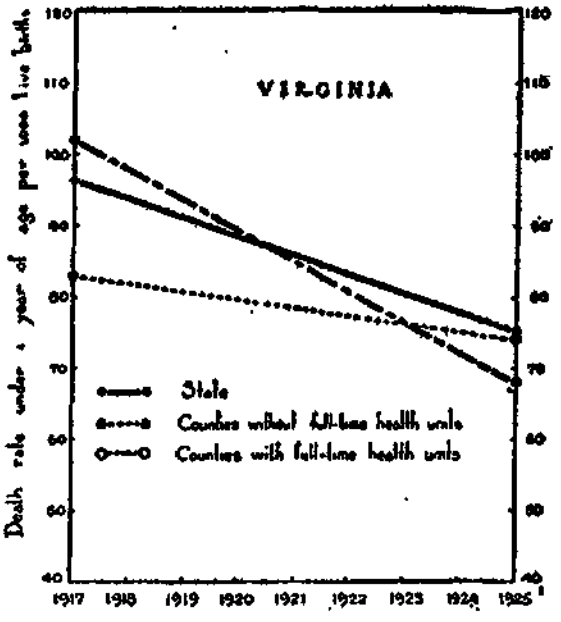


Fig. 11.—Comparative reduction in infant mortality rate over a period of years for the state of Virginia, for a group of counties with full-time health organizations, and for a group of similar counties without full-time health organizations.

In the United States during 1926 there were very few failures of either the old or the newly established county health units. During the year the Board contributed to the budgets of eighty-four health units in twenty-four states. Two

of these units served districts including two or three counties each. The Board also gave aid to sixteen state boards of health for their divisions of central administration of county health work.

The Province of Quebec, Canada, Initiates County Health Work

In 1926 the legislature of the province of Quebec passed an enabling act permitting counties to levy taxes and expend funds for local health service. Three county health units were established in the province during the year, the first of these in Beauce County on May 1. Late in the year a joint unit was inaugurated for St. John and Iberville counties and a third unit in Lake St. John County. Before commencing active work the field staffs of the units, consisting in each instance of a medical director and two public health nurses, went to the United States (Ohio) for a preliminary period of training in county health work.

Each of the units has a staff of five persons: a full-time medical officer of health as director, two public health nurses, a sanitary inspector, and a clerk. The health program is a general one, including the control of communicable diseases, prenatal and infant welfare work, school hygiene, and general sanitation. It is planned to stress especially infant hygiene and

the control of tuberculosis, as these are the most important public health problems in the province.

Beauce County is situated across the river from the city of Quebec. This county and the counties of St. John and Iberville are predominantly rural, having a total population of about sixty-eight thousand. Lake St. John County in the northern part of the province, with a population of about fifty-five thousand, contains important pulp and paper mills. All three units receive a subsidy from the provincial health department; but in each county the municipal councils have voted their approval of the work and have levied taxes toward its support. The church has rendered hearty cooperation in the organization of the work. The parish priest collects vital statistics and makes an official report to the health officer of the unit. The people have manifested an active interest in these efforts to improve health and general sanitary conditions, and it is anticipated that the work will serve as a model for the development of further local health service.

Development of Departmental Health Work in France

Several departments in France have been aided by the Board in the organization of well-rounded departmental health services. Cooperative health demonstrations have been established

in the departments of Saône-et-Loire, Seine-et-Marne, and Hérault.

The department of Saône-et-Loire ranks sixteenth among the departments of France in population, containing more than half a million inhabitants; the chief occupations of its people are mining, metal work, and agriculture. Prior to the inauguration of the health demonstration on July 1, 1926, the department had a full-time chief health officer, five full-time assistants, and a number of part-time disinfectors whose duties centered about terminal disinfection. The Board's aid has been given for the establishment of a statistical service and a departmental public health laboratory, the reorganization of the sanitary inspection service involving full-time personnel, and the extension of public health propaganda. The work of school medical inspection is being developed by the addition of trained full-time public health nurses. Nurses have participated also in prenatal and infant welfare work in the cities of Mâcon, Chalon, and Autun. During the year, 30,896 school children were examined by the school medical inspection service. The medical profession of the department is cooperating in efforts to improve the system of reporting diseases.

The department of Seine-et-Marne is very near Paris. Its population is approximately

three hundred and fifty thousand, of which practically 70 per cent lives in rural communities. The department was regarded as a promising field for the development of modern health service, since, up to the time of the adoption of the cooperative program, the departmental public health work consisted of routine sanitary measures and a tuberculosis organization with a modest program. The central office of the departmental health service is in the city of Melun. There is a full-time director, a laboratory and statistical service, as well as public health nursing on a full-time basis. Public health nursing service, formerly limited to tuberculosis cases, has been extended to other important fields, such as infant and maternity welfare and follow-up work among school children. The staff includes one chief nurse and twelve full-time public health nurses. Although the year 1926 was a period of preparation and organization, favorable progress was made in the development of all departments of health work. Public health education has been particularly successful.

The health demonstration with which the Board is cooperating in the department of Hérault was established in 1924. The personnel consists of a health officer, an assistant director, five assistant health officers, a supervising nurse, twenty-three public health nurses, and a clerical

staff, all on a full-time basis. One of the accomplishments of the unit has been the consolidation of all the health organizations in the department, including private agencies, into a unified health service. The control of communicable diseases is now largely a function of the health officers and public health nurses; disinfection service has been completely reorganized and terminal disinfection has been superseded by bedside or concurrent disinfection and investigation of new cases. The nursing service of the department is developing a general program. Of the twenty-three public health nurses, eight are working in Montpellier and the remainder in eleven towns and villages. One district of the city of Montpellier has been set aside as a demonstration area, with the object of developing a model health and social service center which will afford opportunities for practical field training for students in the nursing school of Montpellier.

Public health educational service has been one of the important features of the demonstration. A special "health-week" was conducted in the department, the program including conferences, lectures, films, exhibits, special meetings for teachers, and a general meeting of the five faculties of the University of Montpellier. An unusual feature of the campaign was a series of lectures on venereal diseases for mixed audiences,

Fig. 12.—Health unit booth at a county fair in Alabama.

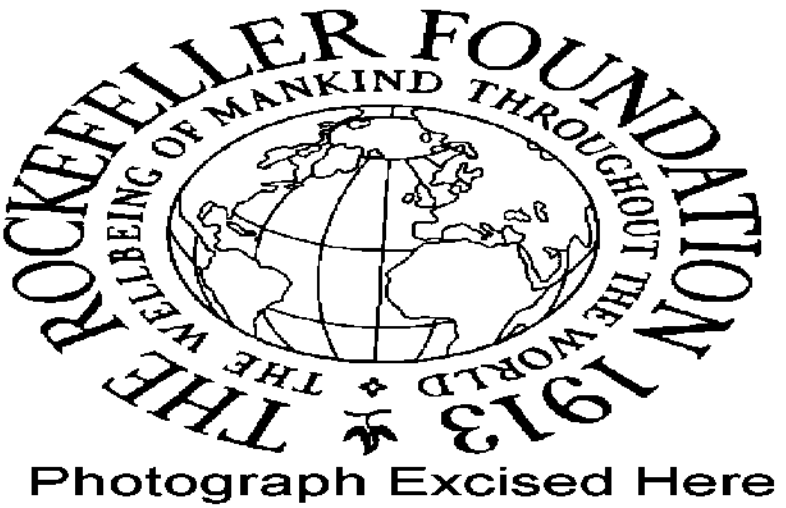


Fig. 13.—Baby clinic in a rural area of Alabama.

probably the first of the kind ever attempted in France. These were well attended. The work of the department has received wide publicity, which has borne fruit in stimulating interest in this type of health organization not only in France but in other countries, representatives of which have made first-hand investigations of the methods employed.

District Health Work in Austria

The Board is assisting in the development of a rural health service in Austria, through the operation of a health demonstration in the district (bezirk) of Hartberg, state of Steiermark. This district is located in a mountainous region and is somewhat isolated. It has a population of about fifty-five thousand, practically all of whom live in the rural areas.

All public and private agencies of the district which are interested in health betterment are cooperating in the work of the demonstration. There is a full-time district health officer (a former International Health Board fellow), appointed and paid by the Central Health Service of Austria. The central office is located in the town of Hartberg. There is a branch health center at Neudau, and it is planned to establish two other branches in the district. Work has been confined largely to the promotion of public

Photograph Excised Here

Fig. 14.—Pupils of a rural school in Rutherford County, Tennessee, who have received typhoid and smallpox vaccination and toxin-antitoxin through the agency of the county health unit.

Photograph Excised Here

Fig. 15.—Group of mothers and children at a district health unit clinic in Koholana, Ceylon.

health education, collection of vital statistics, improvement in sanitation, extension of vaccination, better control of communicable diseases, and medical inspection of school children. Vaccination against smallpox is being extended as rapidly as possible. At the health centers, child welfare, school hygiene, and the control of tuberculosis are being emphasized.

The demonstration is making creditable progress, though the introduction of public health nurses into rural districts in Austria represents such a decided innovation that only through persistent educational effort will the people realize the advisability of employing nurses for certain services. Public health education has been stressed by means of weekly newspaper articles, popular illustrated lectures, and special conferences on public health questions at the teachers' institute. The local Red Cross Society has been an important agency in the dissemination of information. The entire community appears interested in the demonstration and is cooperating to insure its success.

District Work in Czechoslovakia

Since the year 1922 the Board has been contributing toward the operation of a field demonstration of rural hygiene in the district of Kvasice, Moravia, conducted under the auspices of the

Division for the Study and Reform of Health Activities in the Ministry of Health. During 1926 the entire financial support of the demonstration was assumed by local authorities and the activities are being directed by the provincial health officer of Moravia.

Although a modest undertaking, this demonstration has been the means of securing health benefits of a permanent character to the local community and has served to stimulate activity in public health work elsewhere in the country. One of its important contributions has been that it has shown clearly the desirability of the employment of full-time health officers. This is manifested by a recent decision that all future health demonstrations shall be directed by such officials, a significant step forward in Czechoslovakia, where in the past virtually all public health work has been on a part-time basis.

Demonstrations in Poland

The Board has assisted in the organization of health demonstrations in three areas in Poland: the urban district of Mokotow in the city of Warsaw and two rural districts—Warszawa, which is adjacent to Warsaw, and Skierniewice, situated forty miles from that city.

The Mokotow health demonstration and model public health teaching center are carrying on

highly satisfactory work. The personnel of the health center consists of twenty-four full-time workers, eleven part-time workers, and seven temporary employees. Its activities are conducted through eight clinics directed by a part-time special staff and covering tuberculosis, obstetrics, pediatrics, venereal diseases, malaria, diseases of the eye, dentistry, and antialcoholic work. The total number of persons applying for advice and treatment rose from 926 in the first year of operation to 6,589 in 1926. The demonstration has brought about the centralization of different health organizations and institutions working in the general field of public health, and has familiarized the people with the idea of cooperation. Thus its influence is extending beyond strictly public health activities.

The nursing staff has consisted of seven graduate nurses and seven students from the Warsaw School of Nursing. The latter are given practical field training in public health for three months. Several thousand home visits were made by these nurses in 1926. The nursing work of the station has played an important part in securing official approval of trained public health nurses in the work in the city of Warsaw.

Besides serving as a practical training center for public health nurses, the health center also furnished facilities for practical work to student

health officers of the School of Hygiene in Warsaw, to the candidates for the Polish Health Service, and to persons outside Poland interested in public health activities. The health authorities of the city of Warsaw have been so impressed by the work accomplished by the center that two other centers, modeled along similar lines, have recently been opened in other wards of the city. These are entirely supported by local funds.

The public health demonstration in the district of Skierniewice, which has been in operation for almost two years, is supported by the central health service of Poland, the district and town councils, and the International Health Board. It has served a good purpose in initiating organized health work in rural Poland. The work is in the charge of a full-time medical director. The staff consists of nineteen persons, of whom ten were employed on a full-time basis. The part-time personnel includes five physicians and one dentist.

Three health centers have been established in the district thus far, one in the town of Skierniewice and two in small villages. The health center in the town consists of a maternal and infant welfare station, tuberculosis and trachoma dispensaries, and a school polyclinic. The full-time personnel includes three nurses

attached to the health center and two regional visiting nurses in the village centers. The infant welfare, prenatal, and child hygiene work accomplished by these nurses was noteworthy. Two full-time sanitary inspectors made 1,331 inspections in the town of Skierniewice.

Public health education was stressed through popular lectures on scarlet fever, prevention of typhoid fever, and infant and child welfare. An interesting feature of the work was the organization of special courses in homecraft as related to household hygiene. Such courses were given in six villages. The district also served as a training center for the School of Hygiene of Warsaw. The student health officers of this school are required to spend six of the twelve months of their course in either the Mokotow or the Skierniewice demonstration area.

The newly organized health demonstration in the district of Warszawa began operations on October 1, 1926, under the direction of a former fellow of the Board. Plans for the development of this modern health organization which will serve a population of about two hundred thousand, include the establishment of a health center in each school district. By the end of 1926 eight centers had been installed, each in the charge of a part-time medical director and a full-time public health nurse, who conducted

a program of activities comprising tuberculosis, trachoma, venereal disease control, and child and maternal welfare.

Beginning District Health Work in Hungary

With the assistance of the Board, a general public health survey of the district of Gödöllö, Hungary, was made during 1926 preliminary to the organization of a rural health demonstration and the development of a modern rural health service directed by a full-time health officer. This district is about fifteen miles from Budapest and is a subdivision of the county Pest-Pilis-Solt-Kiskun. It has a population of about seventy thousand. The largest town is Gödöllö, with approximately twelve thousand inhabitants. The district is largely agricultural, except for three towns in which there are a few industrial plants. The rural health demonstration for which a program is now being prepared will be supported jointly by the state, the district, and the International Health Board.

County Health Work in Porto Rico

The first local health unit in Porto Rico was started in the municipality of Rio Piedras, October 1, 1926. This municipality is located near the city of San Juan and has a population of about twenty-seven thousand, including the

town of Rio Piedras and outlying agricultural sections. In the municipality are situated the University of Porto Rico, the Normal School, and the Insular Agricultural Experiment Station. The health unit was established to serve as a model for future local health organization on the island. The personnel consists of a thoroughly trained physician as director, two public health nurses, one microscopist-clerk, and one caretaker. Sanitary inspectors were already assigned to the municipality from the central division of rural sanitation. The program of the unit includes public health education, control of communicable diseases, child hygiene, and medical inspection of school children.

Shortly after the unit was organized an outbreak of diphtheria occurred in the municipality. This was handled by the unit staff according to modern methods. Forty-two cases and 254 contacts were isolated, and prophylactic treatments of antitoxin were given; eighty-two children were immunized with toxin-antitoxin. All the measures undertaken by the unit were of a type entirely new to the community and to the island, but public confidence in the work gradually increased because of the significant results achieved in combating the diphtheria epidemic. The local physicians have pledged their support, and the outlook for the permanent

establishment of the unit is extremely favorable.

Local Health Work in Brazil

Full-time local health service, with the municipio as a unit, has been established on a firm basis in Brazil. The municipio is the unit of government in the states of Brazil and corresponds closely to the county in the United States. It covers, on an average, about one thousand square miles and has a population of between five thousand and twenty thousand, although both area and population vary greatly in the different parts of the country. The center of government is usually the largest town of the municipio, and this is also the financial and social center of the area.

Five full-time local health units continued to operate in the state of Minas Geraes during the year 1926, each with a full-time medical director trained in public health work, and a program including public health education, sanitary inspection, communicable disease control, preschool and school hygiene, and malaria control. Usually some one phase of work is emphasized each year; during the past year smallpox was an important problem and smallpox vaccination was stressed. Trachoma, malaria, and hookworm disease, also problems of

great importance, received special attention. In the municipio of Oliveira a school dental clinic was established at which nearly five hundred treatments were given in the course of the year.

The state of São Paulo, the center of coffee cultivation, is the wealthiest and most populous state in Brazil. Its municipios are particularly well suited for the development of full-time health service, and by 1926 there were twelve full-time units in operation with a physician in charge of each. The major part of the work during the year was the control of contagious diseases and of other diseases such as malaria and hookworm. This development in local health service has met an important need in Brazil, and the outlook for its extension is promising.

A Health Unit Established in Ceylon

The first rural health unit in Ceylon was established during the year 1926. It serves the town of Kalutara, which has a population of about fifteen thousand, and the surrounding agricultural district. The region covered has an area of approximately thirty square miles and a population of about thirty thousand. The Government of Ceylon provides all funds for the support of the unit, except the salaries and allowances of three sanitary inspectors and one

midwife who are paid by the town of Kalutara and who restrict their activities to this urban area. The personnel of the unit consists of one medical officer as director, three public health nurses, three midwives, and six sanitary inspectors, one of whom devotes his entire time to malaria survey work.

The program of the unit includes hookworm control, antimalaria measures, and communicable disease control, stressing dysentery, typhoid fever, tuberculosis, and smallpox. Included in the program are laboratory service, the collection of vital statistics, maternal, prenatal, and infant welfare work, preschool and school hygiene, and public health education. This general program has been carried out satisfactorily during the year. Maternity work and infant hygiene are among the important problems of the district and this phase of the work has been highly successful. Five child health centers were established in the district during the year, three of these in the Kalutara urban district, one in a rural community, and one on an estate. Eighty-five clinics were held, 727 home visits were made to expectant mothers and 1,300 visits to infants and preschool children. The average monthly attendance at the clinics for young children was seventy-five. A volunteer social service league was formed in Kalutara, the members of which

will cooperate with the health unit in providing charitable aid when necessary and assist in other forms of social service work.

The results achieved by the Kalutara health unit will in large measure determine the program to be developed for subsequent rural health units in Ceylon. The unit has met with local favor, and already many requests have been received for the establishment of other similar units. In anticipation of the extension of these rural health units, the island has been arbitrarily divided into sixty-three health districts, each with a population and area suitable for the establishment of a local health service.

A Demonstration in Local Health Service in India

Impressed with the practical results of the hookworm campaigns conducted in various parts of the Madras Presidency, the Madura District Board voted funds for a demonstration in rural health work, the program to include education in sanitation and the construction of sufficient public latrines to meet the needs of several villages.

The union village of Usilampatti, which has a town and village population of about seven thousand, was selected as a demonstration area. Preliminary egg counts were made to determine the intensity of the hookworm infection, and

treatment was begun. An intensive educational program was instituted to acquaint the people with the value of latrines in the protection of health. Prominent citizens, teachers, missions, native organizations, and the police aided in the work. Local boy scouts went about singing songs on sanitation which their Tamil pundit had written for them. Local funds were voted to provide a permanent sanitary inspector. This experiment in rural sanitation has met with marked success. The district board is keenly interested in the work, and a program is being developed to include whatever types of public health activity are especially applicable and acceptable to the district.

Organization of a District Health Unit in the Straits Settlements

In accordance with an agreement between the Government of the Straits Settlements and the Board, a district health unit was established September 1, 1926, in the southern district of Malacca, with headquarters at Jasin. The district is the smallest political division of the colony. The personnel of the unit consists of a district health officer who is also the medical officer in charge of the local hospital, a full-time Malay public health nurse who holds a certificate in midwifery and nursing, a full-time

district health dresser who is able to do routine microscopic work and is the government vaccinator for the district, a part-time district microscopist who will do the laboratory work for the hospital and the district, three full-time sanitary inspectors, and a caretaker.

The unit will carry out measures for the control of communicable diseases including quarantine, vaccination against smallpox, and inoculation against cholera, diphtheria, and typhoid fever. Clinics will be established for the control of venereal diseases and yaws, mass treatment for hookworm disease and malaria will be given, and prenatal and infant welfare work, child hygiene, and the examination of school children will be undertaken. The district will keep vital statistics records and carry out a program of health education. Sanitary inspectors will be provided for the district and laboratory facilities will be made available.

Although the district health unit is very new and represents an innovation in both the methods and scope of its work, it has apparently met a very real need of the people for it has been received with enthusiasm. During the first three months of its existence, from September to December, 4,673 persons attended the unit headquarters and 3,124 treatments for various diseases were given. The nurse made 613 visits to

260 homes in carrying out her infant welfare program.

Local Health Service in Siam

The local health organization at Lopburi, Siam, created December 1, 1924, was continued during 1926 in an effort to establish a local health service which would be suitable as a model for other municipal areas of the country. The personnel consisted of a physician, a midwife-nurse, three to five sanitary inspectors, and several lay assistants. A sanitary survey of the municipal area was completed and a general public health program formulated. Educational work was stressed and a large number of illustrated health lectures were given with an estimated attendance of about eighty-seven thousand persons. A start was made in the establishment of health service for mothers and infants.

In conjunction with the work at Lopburi, a laboratory unit was organized for the purpose of introducing public health laboratory methods into the interior of Siam and encouraging physicians and health officers throughout the country to avail themselves more freely of laboratory facilities. Although this unit was incorporated in the Lopburi health unit during a part of 1926 it was regarded as a separate entity. In the

course of the year it was transferred to Pitsanulok, where it is at present located.

Development of Local Health Work in Nicaragua

In Nicaragua during 1926 a permanent health center was organized in Masaya, the capital city of the department of the same name. All the municipalities of the department contribute toward the support of this center, and it also receives funds from the National Health Department. Its program includes the services of a permanent hookworm dispensary with an ambulatory dispensary which visits the surrounding towns and villages. A branch diagnostic laboratory of the National Public Health Service has been installed at the center, and health educational work and sanitation are directed from there. It is the headquarters of the departmental health officer and of the local and departmental sanitary inspectors.

III

Aid to State and National Health Organizations

The functions of a central public health organization are varied. The most important are the administrative; but there are also certain essential activities which require a high degree of specialized technical knowledge. These fundamental activities include sanitary engineering, epidemiology, the collection and interpretation

of vital statistics, and public health laboratory service. The Board has aided state and national governments in the establishment of these services and has lent members of the staff to give technical assistance in the development of general administrative measures.

Developing Departments of Sanitary Engineering

In 1915 only eighteen state boards of health in the United States had divisions of sanitary engineering or employed sanitary engineers; at the close of 1926 all but four states—Nebraska, Nevada, Arizona, and Wyoming—had established such divisions. The chief function of this division is the supervision of public water-supplies and sewage disposal plants. In most states plans for all new projects of this nature must meet the approval of the state sanitary engineer before they can be installed.

The work of the sanitary division is constantly increasing in scope. Automobile touring has resulted in innumerable tourist camps, all of which are potential sources of danger unless their sanitation is supervised. Every roadside well and spring has become a public water-supply. The summer vacation camps, particularly educational camps for boys and girls, have increased tenfold in the past ten years. Migrations of hordes of people, whether at war or at

peace, have always resulted in the overtaxing of the sanitary facilities. Although legislation has not been uniform, most states have been alert

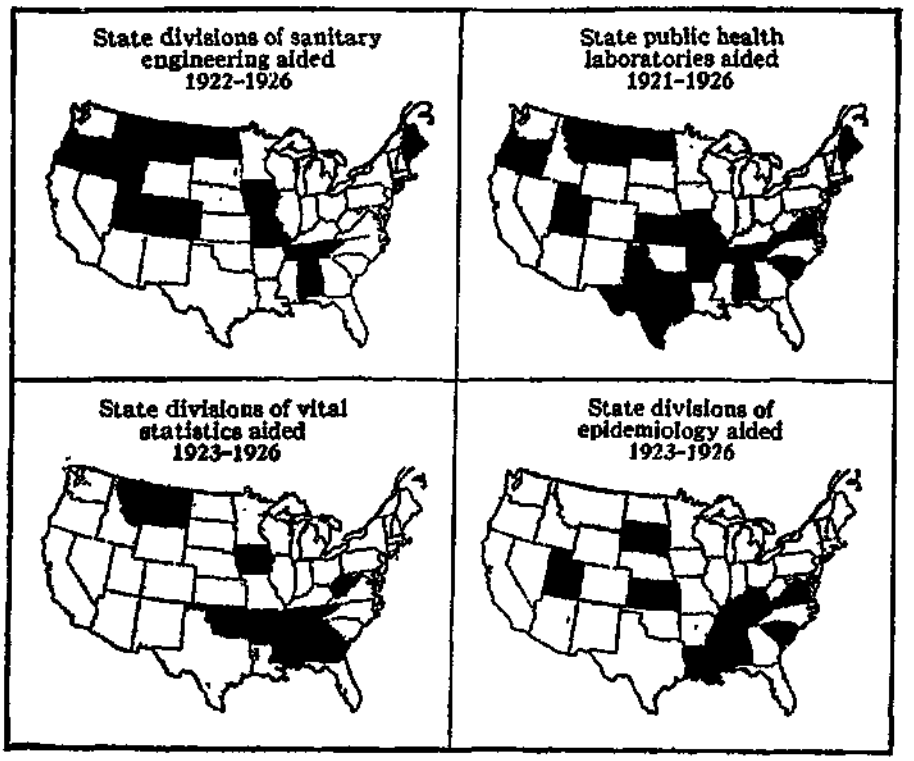


Fig. 16.—States of the United States which have received aid in establishing and strengthening essential divisions of their public health services.

to changing conditions and have met the emergency. In many states the functions of the division of sanitary engineering now include supervision and certification of roadside water-supplies, vacation camps, boys' and girls' summer camps, roadside lunch stands, and tourist rest rooms. Some divisions supervise the milk supply and carry out hotel and restaurant inspection, food inspection, oyster sanitation, and so forth. Some have supervision of industrial

hazards. Thus it is clear that this division of public service plays an important part in preventing serious outbreaks of disease and in safeguarding the life and health of the people. It has been the Board's privilege since 1922 to aid twelve states either in establishing divisions of sanitary engineering or in placing these divisions on a more satisfactory and adequate basis. Six of these states—Alabama, Idaho, Maine, Oregon, Tennessee, and Iowa—were aided in 1926.

In **Nicaragua**, the Division of Sanitary Engineering, organized in 1925 as part of the National Health Service, continued malaria control demonstrations in Rivas, enlarged the scope of control measures in Granada and in Corinto, extended malaria work along the lake front in Managua, and initiated work in Leon and Chinandega.

The Board lent the Government the services of a sanitary engineer as director of this division. In addition to the malaria control work he has supervised the construction of a sewer system in the municipality of Managua; made surveys of the water-supply systems of Granada, Leon, Masaya, Chinandega, and Matagalpa; outlined plans for the construction of a sewer system for the city of Bluefields; and collaborated with all other divisions of the health department in the training of personnel and in general public

health propaganda. The corps of government sanitary inspectors, as well as all local sanitary inspectors, are under the direction of this division, which is cooperating with the Division of Rural Sanitation in securing construction and maintenance of latrines in small towns and rural districts.

The Board's sanitary engineer in Nicaragua continued to assist the Government of **Salvador** in the solution of sanitary engineering problems in conjunction with its program of improved municipal sanitation, the most important feature of which is the development of an adequate water-supply for the city of San Salvador. In addition he continued his services as adviser to a number of malaria control units which the Government has established.

Upon the invitation of the Government of **Costa Rica,** this officer also visited that country as consultant on important sanitary engineering matters. He studied the question of water-supplies for the cities of San José and Limon, and made specific recommendations for the improvement of the water system of the former. These were approved by the Government and the city has voted funds to put them into effect.

The Board has granted a fellowship in sanitary engineering to a local engineer, the Government having signified its intention of organizing a division of sanitary engineering in the national

department of health as soon as a trained engineer is available.

In **Honduras** the Department of Sanitary Engineering, which was developed by a representative of the Board whose services were lent to the Government for this purpose, was established as a functioning governmental activity. During the year the actual direction of the work of the department was gradually assumed by a Honduran engineer appointed as the chief of the department, while the Board's representative served in an advisory capacity. At the close of the year the Board's cooperative arrangement with the Government terminated.

Many studies and surveys pertaining to various phases of general sanitation and sanitary engineering were made during the year. Plans were completed for the chlorination of the water-supply of the capital city of Tegucigalpa. The Division of Sanitary Police, which is under the direction of the Department of Sanitary Engineering, and which is comprised of two corps, one operating in Tegucigalpa, the other in various departments, demonstrated its value as an effective mobile force during an extensive campaign of smallpox vaccination; within a three-month period it gave approximately ten thousand vaccinations and assisted the district medical officer in smallpox control work.

In conjunction with its program of cooperation in the development of the public health service of **Venezuela**, the Board is providing an engineer to assist in the organization of a division of sanitary engineering in the National Health Department and to advise the Government in sanitary engineering projects during a period of at least two years.

Epidemiology

In the early stages of the development of state health organizations the control of communicable diseases was regarded as the chief function, and in some instances the only function, of the state health department. In fact many health departments were originally established to meet the emergency of some threatened epidemic of disease, and later special divisions were organized to control specific diseases, as for example, divisions for tuberculosis or venereal disease control. Other duties were added to the state health organization, and the necessity for a special division for the study and control of epidemics was overlooked. Thus in 1915, though many states had highly organized health departments with special divisions of tuberculosis control, trachoma control, and so forth, only ten had divisions for the control of communicable diseases, or employed epidemiologists. This

Fig. 17.—Examining room at the demonstration health center in Hartberg, Austria.

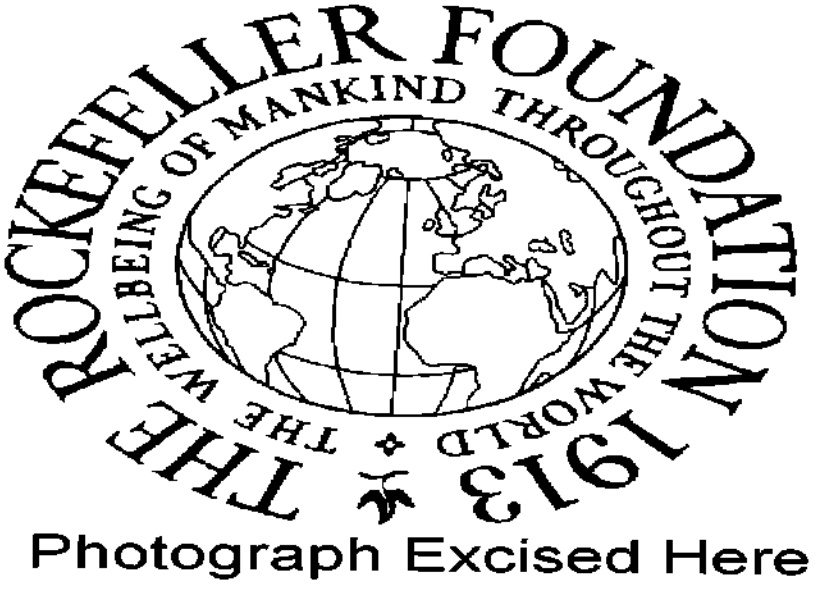


Fig. 18.—Obstetrical clinic, at a newly organized health center in the District of Warszawa, Poland.

defect in organization has been corrected rapidly during the past few years; thirty-eight states now have epidemiological divisions. Since 1923 the Board has assisted eleven states in developing this essential division of public health service. All these states were aided during the year 1926.

Vital Statistics

The care with which records of births and deaths are kept in any community is a fairly accurate index of the enlightenment and the general cultural and intellectual level of the community. Careful vital statistics records are an indication of a social organization that is orderly, stable, and interested in community and national welfare. The older and more populous portions of the United States have kept adequate records for many years. Accurate data have not been available from many of the states, however, until recently. Without accurate vital statistics the health officer can obtain no clear idea of health conditions in the various areas under his supervision nor has he any way of measuring the results of his work. There is a national registration area in the United States both for deaths and for births. The Federal Bureau requires that at least 90 per cent of the annual deaths or births shall be registered before a state can be admitted to this

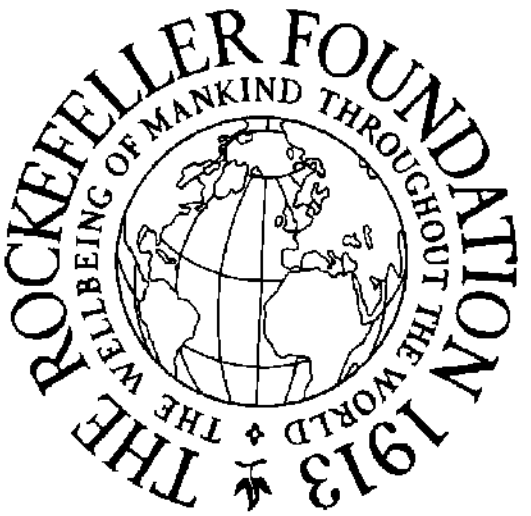


Fig. 19.—Laboratory, Serotherapeutic Department, State Institute of Public Health, Prague, Czechoslovakia.

Fig. 20.—Central Public Health Laboratory, Managua, Nicaragua.

area. In 1915 there were twenty-five states in the registration area for deaths and ten states in the birth registration area. By 1926 all but six states had been admitted to the registration area for deaths and thirty-six states had satisfied requirements for admission to the birth registration area. Since 1923, the Board has aided nine state boards of health in developing their bureaus of vital statistics. Seven of these were aided in 1926.

In fulfilment of its pledge to contribute toward the development of the Statistical Bureau of the Central Health Administration of **Denmark**, the Board entered upon a three-year period of cooperation beginning January 1, 1926. During the year, the Bureau provided swing charts presenting comparative statistics on the prevalence of the ten most important communicable diseases, completed a comprehensive record and index of all cases of pulmonary tuberculosis, undertook the tabulation of morbidity and mortality statistics, and prepared a new registration list of the 2,500 physicians living in Denmark.

Public Health Laboratory Service

Without public health laboratory service no official health agency can function satisfactorily. It is obvious to everyone that the laboratory plays an important rôle when an emergency arises

requiring rapid and accurate diagnostic work, as in an epidemic of diphtheria or rabies. But one of the chief functions of the public health laboratory is the non-spectacular but essential routine control of water, milk, and food supplies, thus serving as an advance sentinel to warn of approaching or potential danger to the health of society.

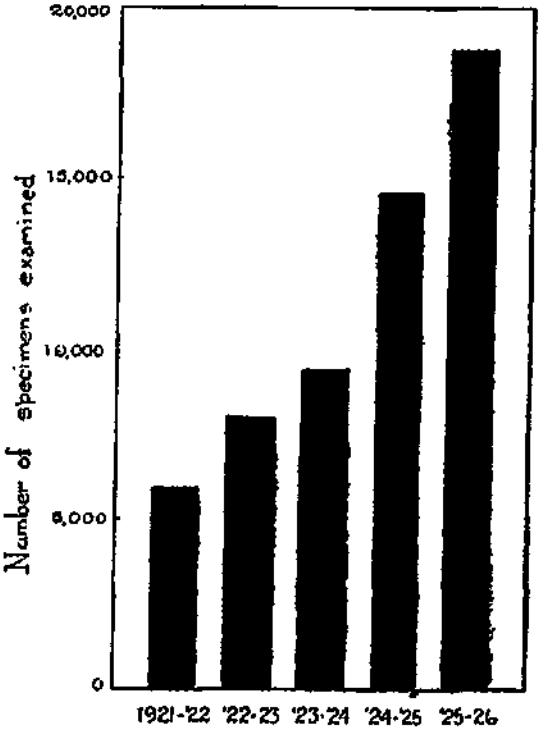


Fig. 21.—Increase in the yearly number of examinations made at the State Public Health Laboratory, Oklahoma, 1921–1926.

In the United States in 1915 many state boards of health did not have other essential bureaus, but every state except New Mexico and Wyoming had some sort of diagnostic laboratory. The former established a state laboratory in 1920; consequently in 1926 only one state board of health was without public health laboratory facilities.

Since 1921 the Board has aided fifteen states in strengthening and improving their public health laboratory services. (See Figure 16.)

Nine states were aided in this way during 1926. It has been found that in those states having a large area, laboratory service can be distributed more evenly and made more readily available by the establishment of branch laboratories located in strategic points and working under the supervision of the parent laboratory. Three states—Tennessee, Virginia, and Alabama—were aided by the Board in maintaining branch laboratory service during the year.

The Division of Public Health Laboratories and Research of the National Public Health Service of **Nicaragua,** which was established in 1925, received financial aid from the Board during 1926 and was supervised by a representative of the Board. Over fifty-one thousand examinations were made during the year at the central laboratory in Managua and the six branch laboratories located in other cities of the country. The laboratories also served as dispensaries and distribution points for all biological products. The division has participated in public health demonstrations, in the training of sanitary officers, and in the instruction of physicians on the interpretation of laboratory reports and on the importance of cooperating with the Public Health Service in controlling communicable diseases.

In **Guatemala** the Board contributed toward the maintenance of a diagnostic laboratory service. It is anticipated that this will prove so valuable that it will lead to the establishment of a complete governmental public health laboratory.

In **Salvador** the Government is carrying out a public health laboratory program at its own expense, the Board's representative serving only as adviser on general policies.

In **Costa Rica** the national public health laboratory which was organized by a member of the Board's staff and has been aided under cooperative agreement, has developed rapidly, increasing the volume of its work and enlarging the area which it serves. This laboratory is under the direction of a former International Health Board fellow.

In **Colombia** a national hygienic laboratory was established in 1926 through the purchase by the Government of a large well-equipped private laboratory. The Board contributed toward the current expenses of the laboratory during the year. A Colombian bacteriologist who was associated with one of the large American medical schools was appointed as assistant director of the laboratory, but before undertaking his new duties he studied public health

laboratory organization in the United States as a guest of the Board.

Assistance to Advisory Boards and Bureaus of Sanitary Reform

The Board continued to assist the Government of **Poland** in the development of its public health service through cooperation with the Advisory Board of the Central Health Service, which began to function January 1, 1925. During 1926 this Board aided in the reorganization of the national health service that is now being effected, particularly with regard to adequate legislation. Uniformity of sanitary laws is an outstanding need in Poland, and efforts are being continued toward the preparation of a modern sanitary code to replace the heterogeneous sanitary decrees which now exist. Laws have already been formulated pertaining to the training of health officers, the unification of public health administration, food and drug control, training of midwives, medical practise, and so forth, and these have been submitted to the national Parliament for final approval.

As the result of a trachoma survey completed by the Advisory Board in 1926, a special department for the control of this disease has been established in the Central Health Service. The city of Warsaw has undertaken a special investigation of the incidence of trachoma among its

school children. On the completion of a tuberculosis survey in Bialystok, an industrial town of about eighty thousand population, a tuberculosis dispensary was established in the town by the National Antituberculosis Association. A typhus survey, financed by the Advisory Board and the Epidemiological Department of the Central Health Service, was completed in 1926. This included epidemiological studies of the disease, investigation of the efficacy of control measures, and the preparation of a program to combat further epidemics. A study of the typhoid fever incidence in certain selected areas was also inaugurated. Studies were made of expenditures for public health betterment in cities and rural districts with the view to determining adequate budgets for public health work in these areas.

The Board is aiding in the development of public health organization in **France** through cooperation with the National Office of Social Hygiene, which was organized in the Ministry of Labor, Hygiene, and Social Welfare in 1925. To carry out the program of this Office, there were created five sections, as follows: documentation and information, propaganda, statistics, liaison, and technical studies. A Central Bureau of Nurses, established in 1925, also functions under the direction of the Office.

The Section of Documentation and Information serves as a central bureau for the dissemination of information pertaining to public health in France and elsewhere. During 1926 it continued a survey of public health organization in the French departments. By the close of the year investigations had been completed in forty-eight of the ninety-three departments. An analysis of the data thus secured has been started. It is planned to keep this information on departmental health services up to date through local representatives and visits of staff members.

The Section of Propaganda seeks to extend the program of public health education by securing the cooperation of various national organizations interested in the subject. This work is in the charge of the director of the health propaganda of the National Committee for the Prevention of Tuberculosis. During 1926 this section conducted an intensive "health-week" campaign in the department of Hérault, in cooperation with various organizations. (See page 100.)

The Section of Statistics, in cooperation with the National Committee for the Prevention of Tuberculosis and the Bureau of General Statistics of France, has made considerable progress in the development of statistical work, particularly as to the classification of deaths according to sex and age and the proper specification of the

cause of death. Statistics for the year 1925 have been completed and are being printed.

The Liaison Section has continued to serve as an agency to promote mutual understanding and cooperation among a large number of national and local organizations and thus prevent duplication of effort. Its work has not been restricted merely to the nation, as it has made contacts with the Health Section of the League of Nations and the League of Red Cross Societies.

The Section of Technical Services has already accomplished work of value by furnishing information to department officials and assisting in plans for the reorganization of health activities in those departments in which surveys have been completed.

In **Czechoslovakia** aid in the development of the national public health program is being given through assistance to the Division for Study and Reform of Public Health Activities, which was established in 1921, and whose activities include rural health work, public health education, studies of child welfare, food control, epidemiology, and cooperation with the Division of Sanitation of the Ministry of Health in the establishment of general sanitation.

During 1926 the Division continued rural health demonstrations at Kvasice and in the Kladno-Lany district. These demonstrations

have proved so satisfactory that it is planned to extend rural health work to other sections. With this end in view three surveys were made—at Holesov in Moravia, at Turčiansky Svätý Martin in Slovakia, and at Vrsovice, a district of the city of Prague. The public health education carried out under the auspices of the Division has been so effective that Czechoslovakia has become a leader in this phase of health work, and health officials from other countries are now visiting the republic to study the methods employed. The outstanding accomplishments in health education for the year include the preparation of practical health exhibits, a film on household hygiene which has been shown to a quarter of a million persons, pamphlets for the use of the Ministry of National Defence and the Moravian Insurance Company, leaflets to promote cooperation on the part of physicians in health education, and a bulletin especially designed for agricultural workers.

A comparative study was made of all child health organizations, both government and private, with a view to unifying and simplifying child welfare activities throughout the republic. Special epidemiological studies of lupus, scarlet fever, and diphtheria were carried out. The vaccination of fourteen thousand soldiers against meningitis was arranged, and investigation was

made of the prevalence and intensity of intestinal parasites among the population of Ruthenia. A study of food and milk supplies, previously completed, has already led to definite reforms. The Division has cooperated with the Division of Sanitation in the Ministry of Health in the development of adequate water-supplies, and since the World War 125 communities have installed new public water-works.

Cooperation with the Government of **Hungary** was continued through aid to the Sanitary Reform Bureau which was organized in the Ministry of Public Welfare in 1925. This Bureau is serving a useful purpose in stimulating government reforms and creating popular interest in the improvement of public health conditions. It has assisted in the preparation of a bill for sanitary reform for presentation to Parliament during the present session.

Under the auspices of the Bureau a study of social insurance in Hungary was completed and a statistical survey of the city of Budapest, with special reference to social insurance, was made in conjunction with an investigation undertaken by the Health Section of the League of Nations. Studies of drug control and the distribution of biological products were conducted, and an investigation of the water-supplies of the country from a technical, chemical, and

biological standpoint was started. The Dick test and immunization against scarlet fever were continued; at the end of 1926 about seventy thousand school children had been tested and some twenty-three thousand immunized.

An extensive program of public health education was carried out. All prominent newspapers throughout the country gave freely of their space for publishing public health material; the circulation of the official bulletin of the Ministry of Health was increased fourfold; educational films with a Hungarian background were prepared; and a special propaganda center was established by the Ministry of Health. This center furnishes a medium for cooperation by the Bureau with private and semiprivate welfare organizations, particularly those concerned with maternal and child welfare. A public health exhibition directed by a member of the Bureau was held in Budapest in the summer of 1926 and was attended by over two hundred thousand people. The Bureau prepared an important section of the exhibition.

The Board's representative in **China**, lent to the Peking Union Medical College as professor of Hygiene and Public Health, rendered advisory aid in the development of a health center established by the College in 1925 in cooperation with the National Epidemic Prevention Bureau and under the auspices of the Metropolitan Police Department.

He continued to serve as a member of the Finance Committee of the National Epidemic Prevention Bureau and assisted in a reorganization of the Bureau designed to improve the manufacture and distribution of the biological products prepared at its laboratory in the Temple of Heaven. He also served in an advisory capacity to the health department of the Metropolitan Area of Peking, created in 1925. A model village has been established by the Chinese comprising a small unit of about a thousand persons living in the immediate vicinity of the Metropolitan Governor's office and enjoying the same health services as those available in the Peking Health Center, along the lines of which the unit was organized. One of the features is an excellent popular health museum installed on the ground floor of the old drum tower.

Toward the end of the year the Board's representative was asked by the Mayor of Shanghai to aid in the establishment and development of a program for a municipal health department. A former International Health Board fellow has been given administrative charge of this organization.

Aid in School Hygiene

In Jamaica the Board has contributed toward the development of a school hygiene demonstration

in St. Andrew Parish and the Board's representative has acted as adviser in the organization and administration of this unit. During 1926 the unit conducted work in six schools in lower St. Andrew Parish. The program included medical examinations of the school children, health education, and dental clinics. The work of the unit has attracted wide attention throughout the colony. Its highly successful results have stimulated interest in child welfare among parents and teachers, and the parishes of Kingston and St. Catherine have voted funds for the organization of similar work in their schools.

IV

Research in Hookworm Control

The Egg Count as a Measure of Intensity of Infection

The development of the Stoll dilution egg-count method of determining hookworm intensity has revolutionized administrative procedures in the control of the disease. Formerly it was necessary to depend upon the incidence index as a measure of the injury which was being produced in any area by hookworm infection. It was considered that every person infected with hookworms had hookworm disease. We now know that this is not the case; on the contrary, many persons harbor a few worms that are causing no measurable harm, and these individuals may be

considered as carriers. A certain proportion of infected persons suffer from hookworm disease, and usually the harm produced bears a direct relation to the number of worms harbored. The egg-count method makes it possible to measure the intensity of the infection of an individual or a community and thus aids in the decision as to best methods of control in a given area.

Before control measures are begun in any locality, a preliminary survey is made to determine the extent and intensity of infection and to study those factors influencing the spread of the disease. We have recognized that there are certain factors over which we have little or no control that play an important part in the distribution and intensity of the disease. We have long known that the disease was limited in general to the area within the thirty-seventh parallels of latitude north and south. Augustine has shown in work at the Board's research station in Andalusia, Alabama, that a temperature of 50° F. checks larval development in the soil. Thus any area that has a minimum nightly temperature below 50° F. for a considerable portion of the year will not have a hookworm problem. Docherty in Ceylon found that though the island was in the tropics and the seacoast had a heavy hookworm infestation, the intensity of the infection decreased as one ascended the mountains.

In the upper mountainous areas, having an altitude of 4,000 to 6,000 feet, the disease was of little consequence. Now, it is obvious that the altitude per se played no real part in this phenomenon, but the cold nights of the mountains did.

The results of a hookworm survey of Mexico by Warren and Carr were of great interest, for there the important factors limiting the disease were two, rainfall and temperature. They found that in an area having an annual rainfall of less than 800 mm (about 30 inches) hookworm disease did not gain foothold. So though Mexico is entirely within the hookworm belt, hookworm disease is limited to that comparatively small area on the coast having 30 or more inches of rainfall annually and an altitude of less than 5,000 feet.

But even when temperature and rainfall are favorable to larval development the disease may not establish itself if the soil is unfavorable. The infective larvae, to survive and develop in the soil, must have moisture, warmth, and food. Augustine, in a survey of Alabama, and Rickard and Kerr in a survey of Tennessee, showed that the type of top-soil may play an important part in the distribution of the disease in an area. Sandy or sandy loam soils are favorable; clay or silt soils are unfavorable. It was found that hookworm disease is limited in Alabama and

Tennessee to those areas having sandy or sandy loam soils, and by referring to original records of the first hookworm control work done in the United States, it may be clearly seen that hookworm disease never was, in fact could not be, widely distributed in all parts of the Southern States, but was definitely limited to areas having a certain geological formation, namely, a sandy or a loamy top-soil.

Furthermore, occupation of the people plays a part in the distribution and intensity of the disease. We have known for years that hookworm disease was an occupational disease, essentially a disease of soil workers, such as farmers, gardeners, and to a lesser extent, bricklayers, miners, and potters. It was considered certain that in areas where human excrement was used in fertilization of soil, as in China, hookworm disease would be very intense; but Cort, Stoll, and their coworkers in the survey of hookworm disease in China, demonstrated that even this conclusion does not always hold. Rice culture, for example, would apparently offer every opportunity for heavy hookworm infection. But the survey proved that it does not. Human excrement is used in fertilization, but it is stored for some time, and in consequence most of the ova are destroyed. Moreover, rice cultivation is carried on under water and the hookworm ova are

unable to develop in water. Thus, the rice workers have a slight, relatively unimportant infection. However, the mulberry tree workers connected with the silk industry in China are very severely infected because of the custom of using large amounts of fresh human excrement in forcing a rapid growth of the mulberry leaves. The soil under these trees was a perfect culture for hookworm larvae, and the people picking the leaves had an intense form of the disease.

The economic status of an area may be a determining factor in the distribution of hookworm disease. Kerr found that in all parts of Florida temperature, rainfall, and type of soil are highly favorable for the development of hookworm larvae, yet the disease is limited to agricultural areas with low economic status. In districts where the people are able to provide their children with shoes and to construct suitable latrines, the disease does not establish itself.

Field investigation has taught us also to use greater discrimination in our methods of attack upon the disease. The chief instruments of warfare are sanitation, education, and treatment. But sanitation is ineffective in the immediate extermination of the disease, and treatment is of little avail in the control of the carrier. Treatment therefore is used to control the disease,

not to eradicate it. The cases of disease are cured, or at least the infection is reduced to the carrier state by treatment. Education and sanitation are employed to control the carrier and to prevent reinfection and spread of the disease.

The influence of occupation upon the disease and the value of sanitation as a control measure are well shown by the results of Augustine's survey of some cotton-mill villages in south Georgia and Alabama. The workers in these villages are drawn from the surrounding farms where their economic status has been low and the sanitation poor. The mill companies provide the workers with comfortable homes and sanitary facilities. The intensity of the disease in the children of these mill villages was found to bear an indirect relationship to the length of time they had lived in the village. Those who had been in residence a year or less had as heavy an infection as those on the surrounding farms. After three years' residence under good sanitary conditions the disease disappeared; light infections persisted, but these became less in number and importance with each succeeding year.

The Stoll egg-counting method requires a careful technique and is somewhat tedious. Efforts have been made during the year by some members of the field staff and also by those working in the field laboratory in Andalusia and

in the laboratories of the Johns Hopkins School of Hygiene and Public Health to modify, simplify, or improve upon the technique. Excellent results have been achieved by Drs. Stoll, Hausheer, Hill, Forsbeck, and by Mrs. Caldwell. Soper, Hill, Kerr, Rickard, and Hausheer, of the Board's staff, and Stoll and Herrick of Johns Hopkins have checked the accuracy of the method by comparison with other egg-count methods and also by worm counts.

One great advantage of the Stoll method is that it aids the administrator in determining the rate of reinfestation in any treated or sanitated area and enables him to measure the degree of success of his work. Hill, in Porto Rico, has used the egg-count technique in a quantitative study of a group of about three hundred people in a sanitated area, before treatment, just after treatment, and one and three years after treatment. The area was one in which all natural factors such as rainfall, temperature, type of soil, and occupation of the people were conducive to a heavy hookworm intensity. The preliminary survey showed that the level of equilibrium of intensity was high. By treatment the incidence of infection was reduced from 90 per cent to 19 per cent, and the intensity of infection was reduced 98 per cent. Reinfection was rapid the first year but less rapid thereafter. However, at

the end of three years the incidence was 58 per cent; but intensity of infection had risen to only 20 per cent of the original infection. With a few exceptions there were, after three years, no cases of infestation which were severe enough to produce measurable injury. This analysis is illuminating and encouraging. Formerly we would have been somewhat discouraged by the rapid increase in the infestation rate despite very satisfactory sanitary measures and adequate initial treatment. But the egg counts have shown that, although under such favorable conditions for hookworm larva development as are found in Porto Rico the reinfestation rate is certain to be high, particularly in the rural districts, nevertheless proper sanitation, with treatment of certain individual cases from time to time, will readily reduce the intensity equilibrium to a point where the infection is of little or no economic importance.

Treatment

Treatment is one of the three important methods of attacking hookworm disease, and any improvement in the methods of treatment aids in control of the disease. The ideal vermifuge would be one which would produce no untoward symptoms in the patient, would be inexpensive and easy to administer, and would remove all

worms with a single administration. Such a drug has not been discovered, but the technique with well-tried remedies is improving.

Carbon tetrachloride has most closely approximated the requirements for an ideal vermifuge, but under certain circumstances it produces intoxication. Professor Lamson and his collaborators at Vanderbilt University have undertaken a pharmacological study of this drug. During the past year these workers have shown that in animals carbon tetrachloride in large doses produces a disarrangement of certain liver functions, with an increase of bile pigment in the blood, a reduced tolerance for levulose, and a drop in blood fibrin. If the drug is given continuously a typical cirrhosis of the liver may be produced. These studies are being continued with the hope that they will be of aid in avoiding intoxication and in increasing the effectiveness of the drug in treatment.

Studies at the Field Research Laboratory, Andalusia, Alabama

During 1926 the work of the field research laboratory in Andalusia was conducted by Mrs. E. L. Caldwell under the direction of Dr. Leach. The chief interest has centered in studies of Ascaris infection in man and in the pig. In the sandy coastal plain of the Southern States

Ascaris infection is rare in man but quite common in pigs. Epidemiological studies seem to indicate that man is not infected by the Ascaris of the pig. A survey was made in the Cherokee Indian School in North Carolina where Ascaris infection among the children is high and where hookworm and Trichuris infection also prevail, in order to study the various factors which affect infestation of man by these parasites. Studies were made and are still being continued to determine the egg-worm ratio for Ascaris and Trichuris in man and in pigs. Methods were devised for the isolation of Ascaris ova from the soil and studies were made of the influence of various types of soil upon the development of Ascaris ova. Studies were also made of other factors which might, under natural conditions, affect the development of Ascaris ova to the infective stage, for example sunlight, shade, temperature, and drought.

Dr. Caldwell in 1921 made some interesting observations in Panama among the San Blas Indians. He noted that these Indians had a very heavy Ascaris infection and a very light hookworm infection, whereas neighboring people had heavy hookworm infection. He suspected that this phenomenon was due to the fact that the San Blas Indians used the open sea as a latrine. During the past year Mrs. Caldwell continued this study and proved that sea-water checks the

development of hookworm ova and kills the larvae but apparently does not prevent the development of Ascaris ova to the infective stage.

Studies in Panama

A field research commission consisting of Drs. Cort and Stoll and Mr. H. W. Brown of the Johns Hopkins University, Professor Riley of the University of Minnesota, Dr. Hall of the United States Department of Animal Industry, and Dr. Augustine of Harvard University, made a visit to Panama and Nicaragua from July to September, 1926, with the object of conducting epidemiological studies in hookworm disease under natural conditions and as influenced by campaign procedures. A complete analysis of the results of these studies is not yet available. Preliminary analysis of the collected data in the area surveyed in Panama, including the district of Penonome, Province of Cocle, and the district of Santiago, Province of Veraguas, indicated the following:

(1) Severe infestation prevailed in these areas ranging from an average of approximately 5,000 ova per cc in the city of Penonome to 20,000 ova per cc in some of the rural zones. Counts were based on formed stools.

(2) Groups treated four years previously showed a lower infestation than the untreated groups, though both lived under similar conditions.

(3) Groups living in homes with latrines showed lower infestation than those whose homes were without such conveniences.

Hall, in field investigations conducted in Central America, noted the influence of topography upon parasitic infestation of animals. With a long dry season, torrential rains, oblique topography, and light stocking of the ranges, the intensity of infestation was very light. Some local areas of heavy infestation have been produced where animals were kept within a restricted range with favorable local conditions of shade and moisture. He points out that the same factors apply in human parasitic infestation.

He notes that one of the indirect results of the hookworm sanitary campaigns in Panama was the reduction of *Cysticercus cellulosae* from 15 per cent to 5 per cent in the hogs coming to the abattoir, with a resultant annual saving of about $40,000. The pigs are infected with these tapeworms through careless disposal of human feces. This unexpected benefit is an important by-product of the sanitary campaigns.

V

Assistance in Programs of Hookworm Control

Cooperation in the West Indies

The Board supported two hookworm field units in **Jamaica** up to April 30, 1926. On that date the five-year cooperative program with the Jamaica Hookworm Commission terminated, and a new agreement for a three-year period

became effective. This provides: (1) that the Government assume entire support of one hookworm unit and continue its activities for at least two years; (2) that the Board continue contribution, on a descending scale, to a second hookworm unit for three years; (3) that the Board's representative in Jamaica supervise activities of both units, serve as consultant to the Government department of health, organize and direct a bureau of health education, assist in the development and operation of a training school for sanitary inspectors, and aid the work conducted by the school hygiene unit.

During 1926 the two treatment units conducted work in areas previously sanitated in the parishes of St. Andrew, St. Mary, and Portland, giving 38,459 treatments to 13,236 persons. The value of a preliminary intensive educational campaign was strikingly shown in the whole-hearted cooperation of large groups that were treated. For example, of the 5,685 inhabitants of Stony Hill area, 99.8 per cent was examined and 81.5 per cent was found to be infected. Of the latter, 94 per cent was treated. Results of the treatment campaign include improved health as manifested by increased earning power, desire for better homes, higher standards of living, and greater pride in home ownership. In all areas it is required that a latrine of standard type be

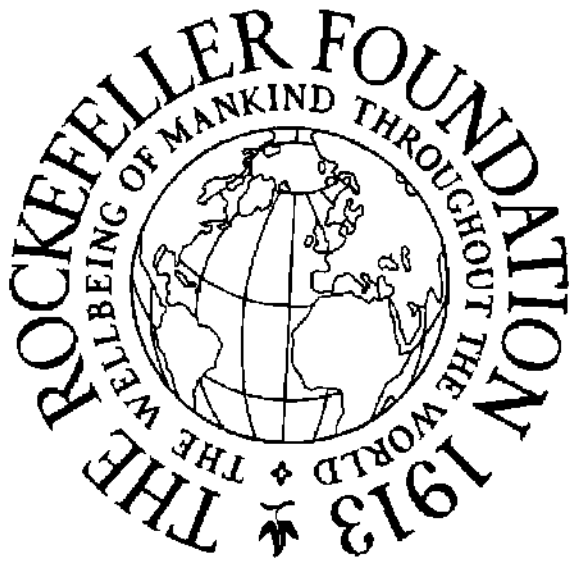


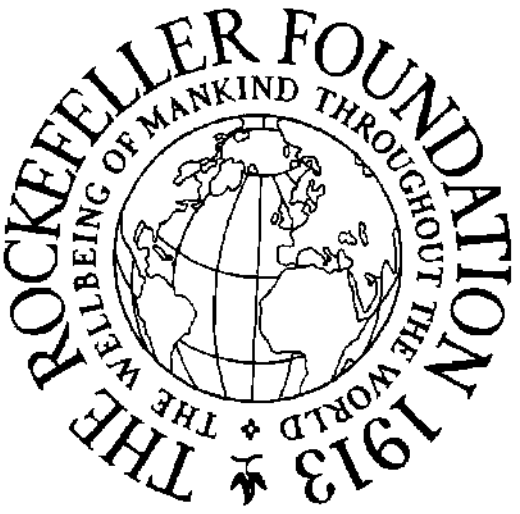
Fig. 22.—A primitive rural home in Porto Rico with a well-constructed latrine.

Fig. 23.—Group of patients gathered for treatment at a Colombia hookworm dispensary.

constructed in every home before treatment is given. Intensive sanitation was carried out during 1926 by local boards of health in the parishes of St. Mary, St. Andrew, St. Catherine, and Manchester, the last three preparing areas in advance for treatment measures.

A Bureau of Health Education, of which the Board's representative is director, was organized May 1, 1926; this serves as the central agency of all public health education in Jamaica. Its object is to develop a public health consciousness by means of intensive propaganda throughout the colony. Publicity is obtained through a popular monthly bulletin, public lectures, motion pictures, and distribution of health literature. It is planned to utilize the hookworm treatment units mainly as educational agencies in those areas where interest in rural sanitation and public health work needs stimulation.

In **Porto Rico** rural sanitation and hookworm treatment campaigns are conducted by the Bureau of Rural Sanitation of the Insular Department of Health. The Board's representative is officially designated as adviser in rural health and sanitation. During 1926 there were four hookworm treatment units operating in the field, three of which were supported entirely by the Government and the fourth jointly by the Government and the International Health Board in



Photograph Excised Here

Fig. 24.—Member of the staff of the Java Rural Sanitation Campaign giving a talk on hookworm disease at a village home.

Photograph Excised Here

Fig. 25.—Coolies collecting garbage and rubbish in a Siamese town. Clean streets and roads are a feature of the program of the Sanitary Campaign Division of the National Department of Health.

accordance with a five-year cooperative agreement (1923–1927). The personnel engaged in the work numbered 125; four of these were physicians.

The treatment units conducted work in eleven areas of four departments, namely, Aguadilla, Arecibo, Mayaguez, and San Juan, administering á total of 147,000 treatments to some eighty-nine thousand persons. Treatment was given only in those areas previously prepared by an unusually good type of general sanitation. Approximately twenty-eight thousand new sanitary latrines were installed, bringing the total number constructed since the organization of the Bureau in 1923 up to about ninety-three thousand. As present latrine regulations require a permanent structure with concrete floor, walls of new lumber, and a roof of new galvanized iron, the latrines erected are superior in type of construction to many of the rural homes. (See Figure 22.) In many instances their installation has developed a household or community pride which has been reflected in a marked improvement in general sanitary conditions about the home. In addition to supervising the construction of latrines in newly opened areas, the Bureau of Rural Sanitation has developed a conservation service to inspect areas in which sanitation and treatment campaigns have already been conducted, thus securing adequate

maintenance and repair of latrines which have been constructed in the past and also promoting construction of new latrines. During 1926 this conservation service secured the repair of some thirteen thousand old latrines and the construction of about six thousand new ones.

The key-note of the rural sanitation program was the educational propaganda which emphasized the importance of the construction and use of latrines. More than one-half of each sanitary inspector's time was devoted to educational work. Health films presenting local scenes, home visits and demonstrations, and the distribution of carefully prepared literature stimulated a keen interest in the rural sanitation work throughout the island.

One novel feature of the educational work was the development of health institutes for rural school teachers. Twelve such institutes were held under the joint auspices of the departments of Public Instruction, Health, and Agriculture, in twelve different districts. Each institute covered an entire week of instruction in public health and agriculture and was attended by approximately two hundred rural school teachers. In addition to the lectures and demonstrations, field inspections were made by groups of twenty teachers to learn the essential features of rural latrine construction and to observe that the

poorest rural home can be provided with acceptable sanitary conveniences.

Control Work in Mexico

The hookworm control operations in Mexico, begun in 1925, continued very satisfactorily during 1926. The work was carried out in cooperation with the Federal Government, which contributed 60 per cent of the budget.

A preliminary survey of the country in 1924 showed that hookworm disease was most widely distributed and most devastating in its effects in a rather narrow strip along the eastern coast. The disease was first attacked therefore in the area where it was doing greatest harm. During the year control measures were conducted in thirteen different areas in the state of Vera Cruz. A modification of the mass treatment method was followed, and 97,660 treatments were administered to 53,527 persons. There were three field units, each under the supervision of a Mexican physician. One unit initiated work in Tuxtepec in the state of Oaxaca during the last months of the year.

Sanitary measures were carried out in conjunction with curative work. During the year the three brigades secured the construction by householders of 6,328 sanitary pit latrines in areas where previously there had been few latrines

in the homes of the laboring classes of the towns and villages and practically none in the rural homes. In order to advance rural sanitation and conserve the results achieved by the campaign, the Department of Health of the state of Vera Cruz has supplied sanitary inspectors to aid in securing the installation of latrines and to follow up sanitary activities in the areas where treatment has been completed.

Progress in Central America

The National Department of Public Health of **Nicaragua**, which was established in 1925, made satisfactory progress during 1926 in developing a well-rounded national health program despite the disturbed political conditions which existed throughout the country for the greater part of the year. The Board cooperated with three divisions, namely, the Division of Rural Sanitation and Local Health Organization, the Division of Public Health Laboratories and Research, and the Division of Sanitary Engineering. The representative of the Board served as consultant to the Government concerning public health in general. A sanitary engineer was lent to give expert advice in malaria control and in the solution of important sanitary problems.

The Division of Rural Sanitation continued and extended the work of the former Division of

Uncinariasis. Hookworm control measures were conducted in ten of the fourteen departments of the republic by permanent organizations which have been established as an integral part of the local governments. These departmental organizations are directed by full-time non-medical sanitary officers, who also have charge of the branch diagnostic laboratories established in the six departmental capitals. These men have all received intensive training in general public health work at the School for Sanitary Inspectors in Managua. The construction and maintenance of latrines represents the most important phase of the follow-up work. In larger cities this is undertaken by a regular corps of sanitary inspectors working under the direction of the Division of Sanitary Engineering.

A special alphabetical series of illustrated articles stressing the prevention of hookworm disease and improvement in sanitation was published in the newspaper which has the largest circulation in the country. This proved popular and was reprinted by the newspaper for general distribution in the form of an attractive pamphlet.

The egg-count method of determining hookworm intensity has been introduced in Nicaragua and future hookworm campaigns are to be based on the needs as disclosed by a preliminary hookworm intensity survey.

The National Health Department of **Panama,** created in 1925, became a functioning government department in 1926, with the appointment of a former International Health Board fellow as director of health. This department has been a natural outgrowth of the hookworm control campaign which has been conducted in Panama with the assistance of the Board. A further outgrowth of the campaign has been the appropriation by the Government of funds for the establishment of a division of sanitary engineering. The Board will cooperate in this enterprise by lending a sanitary engineer from its staff for a two-year period to organize and direct the work of the division.

During 1926 the work of the hookworm field laboratories progressed satisfactorily, reaching a total of 191 towns and villages. Latrine construction and hookworm treatment campaigns were conducted in eleven municipal districts, and also in the island of Otoque and the city of Panama. New field procedure has been adopted in that a preliminary survey is now made of each municipal district by the egg-count method to determine the intensity of infection before administering treatment, and it is customary to carry out sanitation in an area before treatment is administered. Owing to the difficulty in maintaining supervision over widely separated

communities, latrine construction has been limited to accessible villages and permanent homes. By the end of 1926 the provincial sanitary staff had

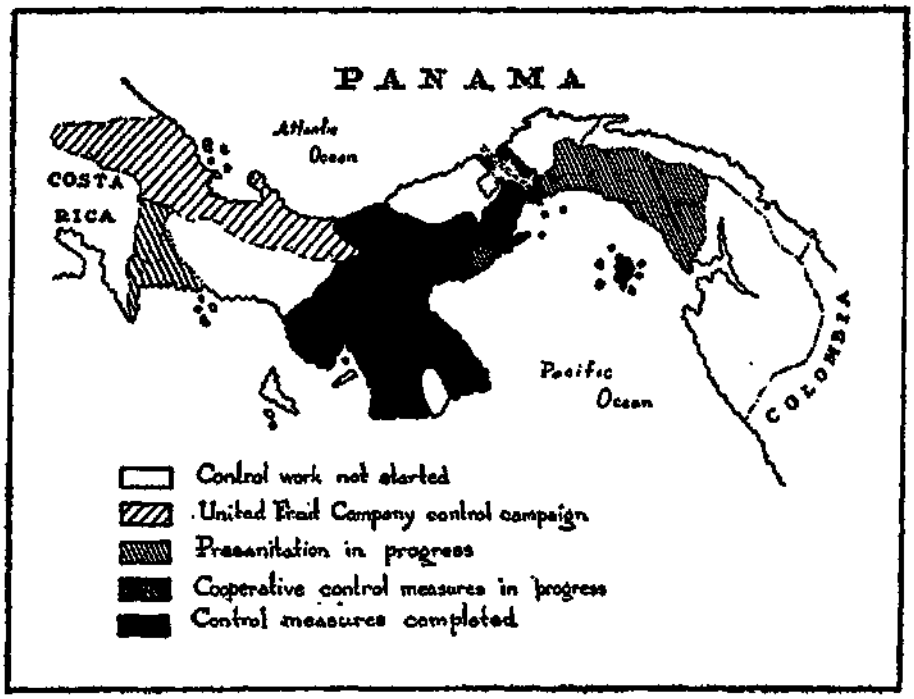


Fig. 26.—Map of Panama showing areas in which latrine campaigns and hookworm treatment have been carried out.

under its supervision over twenty-three thousand dwellings, of which 74 per cent was equipped with latrines; eight inspectors were engaged in permanent sanitary work.

Stress was placed on the educational features of the hookworm campaign, and numerous health bulletins pertaining to the control of important diseases such as diphtheria, tuberculosis, and malaria were widely distributed; 49,805 conferences and lectures were held by the field laboratories and by provincial sanitary inspectors

during the year. The Department of Uncinariasis prepared an attractive health exhibit for the first government agricultural fair, held at Penonome during 1926; this occasioned much interest and was awarded a gold medal.

The Board continued to assist the Government of **Guatemala** in hookworm control in accordance with a five-year agreement which went into effect July 1, 1924. During the first six months of 1926 the Government paid one-half of the cost of the work; beginning July 1, it assumed three-fourths of this cost. Hookworm control activities were carried out in seven departments by five units, four of which operated in the interior and one in the capital city of Guatemala. Work was completed in twenty-two areas.

During the year a hookworm intensity survey by the Stoll egg-count method was initiated. In the three areas studied 81 per cent of the population was found infected with hookworms and 65 per cent of this number had infections of sufficient intensity to produce measurable symptoms, that is, they harbored more than one hundred worms. This analysis brings out an interesting point, namely, that in Guatemala a high proportion of those infected with hookworms suffer from actual hookworm disease. Furthermore, though the percentage of those infected in different areas and groups may vary considerably, the relative

proportion of those infected who harbor one hundred worms or more is quite constant in the groups studied, whether analyzed as to age, sex, race, or occupation. This would indicate that there may be a variation in natural factors in different areas of the country which may affect incidence of infection. Nevertheless, there exists a uniformity in customs and habits of the people, with almost total absence of those sanitary precautions which would aid in the prevention of the disease. It also indicates that the intensity equilibrium is high, and though treatment would be very valuable in relieving suffering for a temporary period the return to the former level of intensity would be unusually rapid. It is in this type of population that the mass treatment method is most effective.

Toward the end of the year mass treatment was introduced in several rural areas and carbon tetrachloride was used as the vermifuge for the first time. The results obtained were satisfactory. The Department of Uncinariasis issued a pamphlet on latrine construction which was widely distributed, and although progress in latrine construction has been slow there is a growing public opinion in favor of higher sanitary standards.

The Department of Uncinariasis in Costa Rica was financed entirely by the Government during

1926 except for a small subsidy from the Board toward the salary of the Director of the Department of Public Health. The Board's representative in Panama assisted in the supervision of the hookworm control program. Practically the entire republic has now been covered by treatment campaigns and the intensity of infection has decreased materially. During the year, 38,841 treatments were administered to 16,732 persons; special emphasis was placed on control work among school children. Sanitation in the rural areas has not progressed as rapidly as has been desired, and it is believed that an intensive educational campaign will be necessary before a satisfactory sanitation program can be developed.

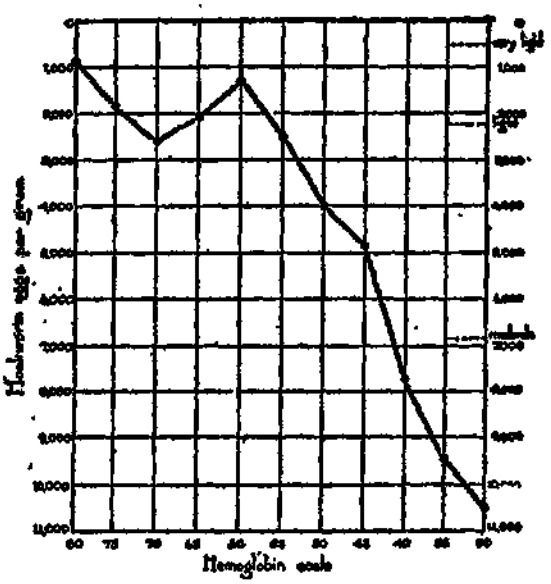


Fig. 27.—Correlation between the number of hookworm eggs per gram of feces and the hemoglobin index of 394 persons examined in Costa Rica.

The intensity of hookworm infestation in the country has been studied. In a series of 394 cases in which egg counts were made and the hemoglobin tested, a direct correlation between the intensity of infection and the loss of

hemoglobin was observed. A large proportion of those examined by egg count was found to be lightly infected, only 30 per cent of the cases having more than 3,000 ova per gram of feces. The rural population had two and one-half times as many severe cases as the city dwellers.

Creditable progress was made in the further development of a national public health service. During the year a Costa Rican who had held an International Health Board fellowship in vital statistics returned from the United States to assume the post of director of the Division of Vital Statistics. Plans were matured for a population census of the republic, which will represent the first complete census ever undertaken in the country. Important statistical studies in birth registration and mortality rates are under way.

In **Salvador** the hookworm control program is now entirely financed by the Government. The Board's representative in Nicaragua makes occasional visits to consult with the authorities as to the operation of the campaign.

During 1926, in addition to the work of the permanent dispensary in the capital city of San Salvador, intensive treatment campaigns were conducted in six departments of the republic by twenty ambulatory dispensaries. Nine departments were supervised by sanitary inspectors

who aided in the establishment of permanent sanitation. In the course of the year, 2,019 new sanitary latrines were erected, and 3,296 latrines which had not been up to the required standards were repaired or rebuilt.

Over Half a Million Hookworm Treatments in Colombia

The new five-year cooperative agreement between the Government of Colombia and the Board for the control of hookworm disease became effective January 1, 1926. Under this agreement the Department of Uncinariasis became a section of the national health service and the Board's representative in Colombia undertook the supervision of the division.

During the year, twenty-five field dispensaries conducted hookworm control campaigns in eighty-nine municipalities in eleven states. The dispensaries were widely scattered throughout an extensive territory, so that the inspection of the units and the distribution of supplies were difficult. Two of the most distant field dispensaries are situated twenty-seven days' travel from each other. Nevertheless, in the course of the year 570,321 treatments were administered to 329,565 persons, representing the equivalent of a daily average of 1,563 treatments. During the period from September 1, 1924, to December 31, 1926, a total of 1,237,781 treatments was given. In spite

of the extension of the work to areas at greater distances from the source of supplies and the increasing necessity of treating small communities as well as large centers of population, the per capita cost of treatment during 1926 was twenty-nine cents, including expenditures for educational work and $15,000 for sanitary work.

One of the developments of the year was the adoption of a resolution by the Director of the National Department of Health which gives sanitary inspectors authority to enforce regulations in areas where the hookworm campaign is in progress. Municipalities are required to appoint a permanent sanitary inspector for every 5,000 urban population. During 1926 such inspectors were appointed by thirty-four municipalities. Their work is largely directed toward latrine construction. Five states passed laws whereby the governor is obliged to veto any and all municipal budgets which do not include an item to cover the salary of permanent sanitary inspectors to be appointed as soon as the Department of Uncinariasis undertakes a campaign in the municipality.

A total of 879,423 persons attended the 21,470 conferences held by field units during the year. These talks, together with the hookworm films and other demonstrations, have given the average person in the infected areas a satisfactory

knowledge of the cause, cure, and prevention of hookworm disease. Educational work was also conducted in the schools, and prizes were given to the children who led their classes in public oral examinations in general knowledge of hookworm disease.

The Government of Colombia appropriated $60,000 for the hookworm work conducted during 1926, or approximately one cent per capita. In addition, eight states voted funds for this work amounting to $52,500. Municipalities also contributed toward the campaign, supplying in all instances dispensaries with suitable buildings, and in some instances free transportation of supplies and personnel. The work is bringing about the strengthening of the national health organization of the country, and is leading the states and municipalities to assume increased responsibility for health work and to enlarge their local organizations.

Developments in Paraguay

The year 1926 marked the third year of the Board's cooperation with the Paraguayan Government in the control of hookworm disease. Satisfactory progress has been made both from the standpoint of improved sanitation and administration of treatments. The Board's representative has been assisted by five medical officers

who have been assigned to key points. During the year 220,681 treatments were administered to 122,954 persons. Control operations in and about the capital city of Asunción were completed, and twenty-eight new posts were established in various parts of the interior, thirteen of which were still active at the close of the year. A permanent dispensary was maintained in Asuncion throughout the year. At the request of the Government special training in the administration of anthelmintics was given to registered midwives who are employed as visiting nurses. An experienced pharmacist of the military medical service was also trained in anthelmintic administration, as the Government has planned to treat the entire military force.

Efforts to improve sanitation through intensive educational work have met with success, and in several of the areas where work was completed in 1926 practically every home has been supplied with a sanitary latrine. These results are demonstrating to public health officials and also to the general population the necessity for a permanent sanitary organization, the nucleus of which will probably be established through the creation of a service of reinspection for the areas already covered in the hookworm campaign.

In view of an extensive epidemic of smallpox in the republic, cooperation with the National

Department of Health in the promotion of vaccination was continued, and more than 21,000 persons were vaccinated during the year.

A Permanent Control Program in Ceylon

The results of the island-wide egg-count survey of Ceylon completed in 1925 indicated that there was an incidence of hookworm infection of from 85 per cent to 95 per cent in all the provinces, and that the intensity rate throughout the island averaged 1,102 ova per gram of feces. The Board's representative therefore prepared a program of permanent control which would reach all parts of the island. This includes the gradual establishment of adequate sanitation together with periodic mass treatment until sanitation is secured.

In accordance with this plan the Government will administer mass hookworm treatment through the following agencies: school units, estate units, government hospitals and dispensaries, and the Mandapam labor camp. The personnel required for this work consists of a director, six to eight medical officers, twenty-five to thirty-five dispensers, six to eight microscopists, three to four clerks, and eight to ten laborers. The educational work, which is regarded as very important, is to be carried out by the medical officers. All schools of the island

will be visited; it is planned to treat each school child yearly for two years and afterward at intervals to be determined by egg counts. The villagers may also receive treatment at the schools. The purpose of the estate program is to provide periodic treatment for all the estate laborers every twelve to eighteen months. The estate dispensers may carry out this work without aid from the Government, but in many instances the help of the Government dispensers will be necessary. The schedule will be planned so that a medical officer need not remain on an estate more than a day. Laborers recruited in India for the Ceylon estates are detained at the Mandapam camp in Southern India for six days. The permanent control program requires that all laborers be given one hookworm treatment on the fourth day of their detention. A large number of the local population apply to the hospitals and dispensaries each year for one cause or another. It is intended that every hospital patient shall be given one hookworm treatment each year except in cases where such treatment is contraindicated.

An extensive educational campaign will be included in the program consisting of lectures with exhibits, distribution of literature, and demonstration of actual cases and results of treatment. Most of these lectures will be given

in the schools and on the estates, but the villagers will be encouraged to attend the school lectures and demonstrations. A sanitary program has also been worked out in detail and will be conducted through the schools, and on the estates through mandatory regulations. Sanitation of the villages will be developed by persuasive measures, preceded by extensive educational work.

It is realized that permanent control of hookworm disease will not come through treatment, but through the establishment of general sanitation. However, sanitary customs which have been in operation for generations cannot be easily changed, and until this can be accomplished treatment will relieve countless individuals, save many lives, and render all more able to withstand the rigors of every-day life and the ravages of epidemic diseases. Furthermore, treatment will reduce the total mass of parasites and consequently decrease the intensity of soil infection.

The program of mass periodic treatment is a somewhat flexible one and will be modified in accordance with the results of subsequent egg-count surveys.

Though all phases of the permanent control program were not in operation until the end of the year 1926, nevertheless 1,357,901 treatments were given throughout the island during the

year; of these, 174,691 were administered by the campaign units in the villages and schools and on the estates, 77,278 treatments were given at the Mandapam camp, more than 85,000 by estate staffs, and over 800,000 in the government hospitals and dispensaries.

Control Measures in the Madras Presidency, India

A study of hookworm infection in the Madras Presidency, India, begun in 1925, was developed and widely extended during 1926. An attempt was made to define the intensity of infection in various parts of the Presidency by the Stoll egg-count method. The work begun in the Tanjore district and at the Mandapam camp in 1925 was continued and work was initiated in five new districts, Malabar, Madura, South Kanara, Chittoor, and Cuddapah. The examinations at the Mandapam camp, where laborers are detained prior to debarkation for Ceylon, afforded an unusual opportunity to obtain a cross-section of the infection, as large numbers of persons from many parts of India gather there.

While previous infection surveys of the Presidency have shown that approximately 90 per cent of the population is infected with hookworms, the intensity surveys indicate that most of this infection is light. High degrees of infection are limited to a relatively small proportion of

the population. At the Mandapam camp, where 13,924 egg counts were made, the average count

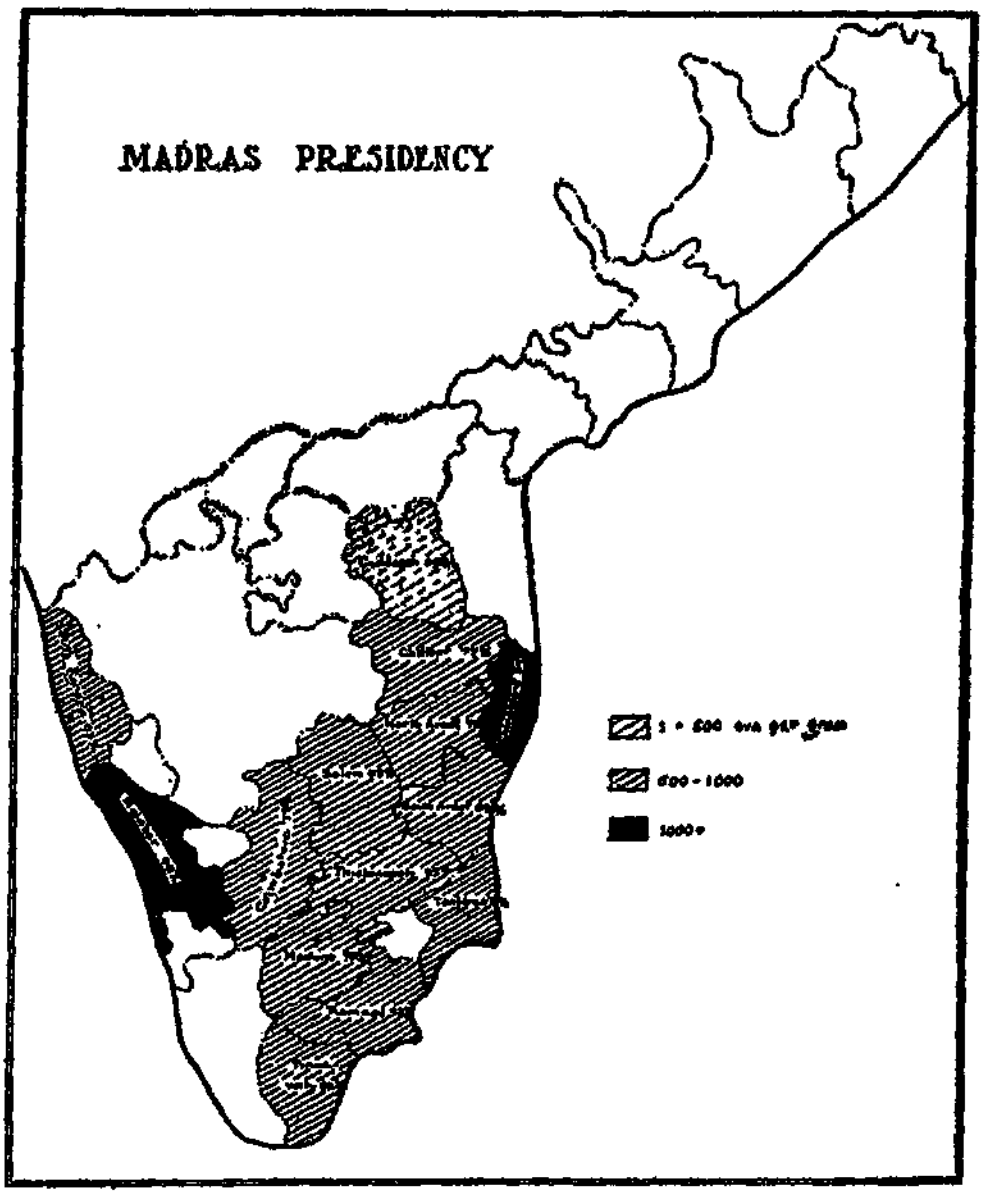


Fig. 28.—Intensity of hookworm infection in certain districts of the Madras Presidency, India, as shown by egg counts.

for all ages and both sexes was 873 ova per gram. This represents an approximate infection of only about forty worms. In the Malabar district the intensity was two to three times that of any

other district. The average number of worms harbored by the people of this area was approximately seventy-eight. This intensity survey confirms previous clinical observation that hookworm disease is more severe and more prevalent in this district than in any other part of the Presidency. In the Madura district 6,617 persons were examined by the egg-count method. Of these, 69 per cent was found positive and the average number of worms harbored per person was thirty. In the Chittoor district the intensity of infection was also light, the people harboring approximately forty-five worms on the average, though 77 per cent was found positive. In the Cuddapah district 54 per cent was infected, with an average for both sexes and all ages of less than ten worms per person.

It is probable that the light infection in the Chittoor, Tanjore, Cuddapah, and Madura districts is due to the low rainfall. In the Cuddapah district the rainfall is only 27 inches a year, and in the Tanjore district where the highest rainfall in these eastern areas occurs it is only 51 inches a year. In the western districts the rainfall is much higher; in Malabar, for example, it is 139 inches a year, which probably accounts for the greater hookworm intensity of that district. In the South Kanara district, which is also in the west, 2,471 persons in various sections

were examined. Here, although the average annual rainfall is 160 inches, the intensity of infection is low, the average number of worms harbored being only about twenty-five. It is possible that the type of soil in this province is unfavorable for the development of the larvae. The distribution of other intestinal parasites was studied during the year and it was found that Ascaris and Trichuris infections were very common in Malabar and South Kanara districts, where the rainfall was high.

This intensity survey is the most complete one that has ever been made in any area; all told, 35,167 persons were examined. The results have been most striking and valuable for they have demonstrated that although the hookworm parasite is widely distributed throughout the Madras Presidency, actual hookworm disease of sufficient intensity to be of economic importance is limited to certain very narrow geographic areas. It is obvious that the clear cut results of the survey will simplify the work of the administrator in planning control measures.

Successful Educational Work in Java

The sanitary campaign which was conducted in Serang District, Java, during 1925 in conjunction with the cooperative hookworm control demonstration, and which was based on

principles of education and persuasion, met with such remarkable success that the chief medical officer requested that similar work be undertaken in West, Mid, and East Java. In these areas it was arranged that the Board's representative supervise the intensive program of public health education and that the Government direct, at its own expense, the installation of latrines and the administration of treatment. In accordance with this plan, rural sanitary campaigns were developed and expanded during 1926. Four new demonstration centers in sanitation were established; these were located in the residencies of Semarang, East Priangan, Kediri, and Lampongs, South Sumatra. By the end of the year there were eight posts in operation on the island.

A Division of Health Education has been created in the Government service and the Board's representative has been designated as director. This division will exercise an advisory supervision over the sanitary campaigns and develop a government service in public health education. The educational methods which are employed are peculiarly suited to the customs and needs of the people. A corps of instructors called *mantris* have been selected with great care and have been given intensive training in the subject matter of public health and sanitation and also in methods of winning popular interest and approval. The

home demonstration has proved the most useful and effective method of introducing the subject of soil-pollution control to the simple kampong population. The patient, intelligent, pleasant-mannered mantri talks quietly to the family group and invites friendly discussion of pertinent questions. In his hands are suitable models and simple charts which are thoroughly explained. Visits are repeated and, through painstaking efforts, active cooperation in the construction and use of a household latrine is secured. Two healthmobiles with facilities for showing motion pictures have been employed to stimulate interest in areas where work is being initiated. Poems and native songs have been written, introducing the theme of prevention of disease by proper sanitary measures.

Special attention has been given to the type of latrine to be recommended, taking into consideration the availability of suitable materials for construction, serviceability, permanence, simplicity, and low cost. The types recommended vary with the locality, but in the majority of districts a simple pit latrine with bamboo floor and bamboo superstructure is the only kind the people can afford to build.

The Central Government has guaranteed approximately $28,000 per year for public health education, and two local residency councils have

appropriated substantial funds for rural sanitation and public health education in the year 1927.

Work in Urban and Rural Siam

In Siam the Board continued to cooperate with the Government in a five-year program for the control of hookworm disease and the development of urban and rural public health work. This program is conducted through the Sanitary Campaign Division of the National Department of Public Health, which is directed by Siamese officials, the Board's representatives serving in an advisory capacity. This division is developing a public health program through the operation of the following field units: five hookworm control units working in widely separated provinces, a health boat unit, which promotes health work in the river communities of the country, a mobile laboratory unit, a health education section, a local health unit at Lopburi, and a corps of local full-time permanent sanitary inspectors. At the close of 1926 the entire personnel of the division numbered 111, having been slightly increased during the year.

During the period between February 7, 1917, when hookworm control measures were started in Siam, and December 31, 1926, a total of 1,231,632 persons received treatment for intestinal parasites. During 1926 control measures were

steadily extended into new areas by the five control units and the health boat unit, which administered a total of 172,396 treatments. The Health Section of the Siamese Red Cross examined and treated school children of Bangkok, and the Army Medical Corps examined and treated soldiers in their garrisons.

Sanitary work made satisfactory progress during the year. In the eight areas in which the hookworm field units completed control work 17,443 new latrines were constructed and 322 old ones were repaired to meet sanitary requirements. In order to maintain the benefits of the control work the Sanitary Campaign Division appointed local full-time sanitary inspectors for the areas in which the hookworm units had completed operations. At the end of 1926, thirty-two areas were served by such inspectors; twenty-three of these were being paid from the budget of the Sanitary Campaign Division, seven by the National Department of Public Health, and two by municipalities. Other sanitary work was carried out during the year, such as inspection of water-supplies, markets, prisons, hospitals, and schools. The inspections of water-supplies totaled 8,403.

An extensive epidemic of cholera prevailed throughout Siam during the year, and the Sanitary Campaign Division was called upon to assist in cholera prevention work. Several of the

hookworm units, including the health boat, were detailed to this work; they administered in all 48,357 anticholera inoculations. An epidemic of smallpox required the aid of one of the hookworm units for several months; 31,524 vaccinations were accomplished by this unit and the disease was brought under control.

A section of public health education was organized under the direction of the Sanitary Campaign Division. Its work, directed particularly against cholera and other filth-borne diseases, has been very effective. During the year 5,611 lectures on hookworm control, public health, and sanitation were given to an aggregate audience of over four hundred thousand persons. In view of the fact that thousands of Buddhist pilgrims from all parts of Siam visit Prabat each year, it was felt that this pilgrimage presented an unusual opportunity for the dissemination of health propaganda. A health exhibit was accordingly prepared which centered about an attractive and instructive booth. The prevention of cholera was especially stressed by means of posters and electric signs. It was estimated that about twenty-one thousand people visited the exhibit. An outdoor cinema theater established in Bangkok for the purpose of promoting health education proved very popular. The health boat unit gave 280 health lectures, which

were attended by over thirty-one thousand persons.

The short course for health officers which was established under the auspices of the Sanitary Campaign Division in 1924 was again offered in 1926, extending over a six weeks' period. The student body numbered twenty-four and consisted of circle health officers, provincial health officers, heads of hookworm control units, and municipal physicians. Both theoretical work and field demonstrations were included in the course of training and the results achieved were very satisfactory.

Inauguration of Cooperative Work in the Straits Settlements

During 1926 the Government of the Straits Settlements and the Board inaugurated a three-year cooperative program which provides for the development of rural sanitation and the establishment of a rural health organization in a small district where all phases of public health work will be carried out. The first year of the rural sanitary campaign was devoted to intensive hookworm control work in Malacca.

The Board's representative first made a general survey of rural sanitary conditions in Malacca, investigating particularly the prevalence and severity of hookworm disease. All

factors influencing the distribution of the disease were studied, including rainfall, temperature,

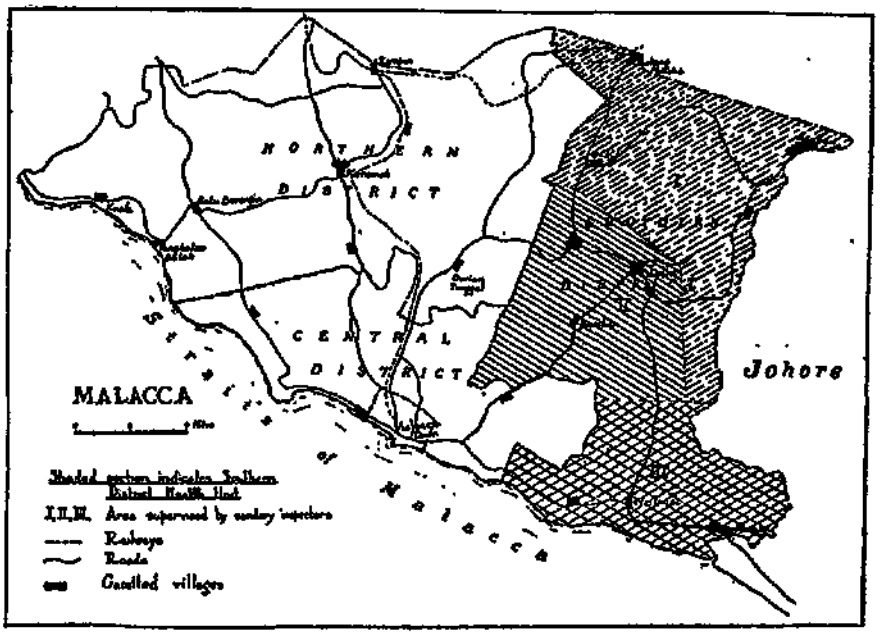


Fig. 29.—Map of Malacca, Straits Settlements, showing area in which measures for the control of hookworm disease were conducted during 1926.

soil, and customs and habits of the people. It was discovered that the rainfall and temperature and soil were uniformly favorable for larval development and that the habits and customs of the rural people were such that the soil was universally polluted. It was not surprising therefore to find that the incidence of the disease throughout the island was almost 80 per cent. Studies of various age, racial, and occupational groups showed that there was a remarkably uniform distribution of infection. The intensity of infection was studied by means of a simplified

egg-count method devised by the Board's representatives. The results of these studies were checked with Stoll egg counts. The findings indicated that only 8 per cent of the population could be grouped as subclinical or carrier cases, that about 40 per cent was moderately infected, while over 30 per cent had a sufficiently severe infection to produce actual, and in many instances severe, clinical symptoms of hookworm disease.

Following this preliminary survey it was possible to formulate a plan of control. It was obvious that under the conditions existing in Malacca, mass treatment would be the most satisfactory method of procedure. To insure success in this work it was necessary to conduct an extensive educational campaign so that the people might become familiar with the mode of hookworm infection and the methods of preventing its spread. Lectures were given in many different dialects because of the cosmopolitan character of the population, which included Europeans, Eurasians, Malays, persons from various localities of China with different dialects, and also various Indian tribes with distinctive dialects and habits. The treatments administered during the year totaled 142,063; these included the treatments given at the government hospitals, dispensaries, and quarantine stations.

In accordance with the agreement with the Government, sanitary measures were not carried out by the campaign staff but by the official health departments under the respective health officers. This work progressed satisfactorily during 1926. All government buildings in rural Malacca have been provided with latrines, and arrangements have been completed for installing these conveniences in the schools. Measures are being taken to establish adequate conservancy systems for the gazetted villages, and the regulations to establish sanitary latrines on the estates are being enforced. Compulsory sanitation is not feasible in the kampongs and isolated rural districts; latrine construction must be secured by persuasive methods and must be preceded by careful educational campaigns.

Cooperation in the South Sea Islands

The Board's representative served as adviser on hookworm control to the governments of Fiji, Western Samoa, and Tonga during 1926.

In **Fiji**, control measures have removed hookworm disease as an economic factor. In **Western Samoa**, adequate sanitation is being rapidly extended throughout the colony, and the generally improved public health conditions demonstrate the value of preventive medicine among a native population. In **Tonga**, the installation of

concrete pit latrines of a standard type has been carried out with vigor; about one-half the population of the kingdom had been accommodated with suitable latrines by the close of the year.

Government Control Program in the Seychelles

The Board's resurvey of the Seychelles led to a vigorous hookworm control program under government direction. As available government funds were inadequate, the Board contributed a small sum toward the purchase of anthelmintics sufficient to treat ten thousand persons.

Infection Survey of Sarawak

At the request of the Government of Sarawak, the Director of the Board's work in Siam and the Straits Settlements undertook a public health survey of that protectorate, particularly with regard to the prevalence of hookworm disease, and offered recommendations looking toward the development of an adequate health program for the country. The Board has accepted the Government's invitation to lend a representative to develop such a program.

Hookworm Control in the Mines of Spain

During 1925 a hookworm survey was made of the mines of Spain. Some of the mines were found heavily infected, while others were entirely

free of infection. Recommendations were submitted for controlling hookworm disease in the infested mines through better sanitation, supplemented by educational work and medical treatment. On May 12, 1926, the Government created an organization to carry out this work under the supervision of a specially designated medical officer of the National Health Service and with the cooperation of the Board. An active campaign was instituted in three government lead mines situated at Linares in the Province of Jaen. All the employees of these mines were examined, and treatment was administered to those infected. An adequate number of portable sanitary latrines were installed and washrooms were provided for the miners. Hookworm control was also undertaken at privately owned lead mines in the Province of Jaen, where a laboratory supported by several mining companies has been installed under the direction of a full-time physician, and at Pueblo Nuevo Terrible in the Province of Cordoba, which is one of the largest coal mining districts in Spain. At the latter, more than fifteen thousand examinations were made and several hundred treatments were administered. A certificate showing freedom from infection is given to each miner following treatment, and this must be presented with application for employment at any other mine.

VI

Malaria

Field Investigations

The Board's Station for Field Studies in Malaria was transferred from Leesburg, Georgia, to Edenton, North Carolina, in March, 1926, to give opportunity for the study of a different type of malaria problem from that encountered among the Georgia ponds and lime sinks. The activities of the station during the 1926 season were concentrated on two major projects in which attention was directed toward ecological studies of anopheline mosquitoes. It was necessary to modify the original plans somewhat because of an extremely dry season, and another major project dealing with the county-wide delimitation of malaria by means of spleen surveys was begun late in the year. Minor projects were also developed, attention being given to incidence of sporozoites in the glands of Anopheles mosquitoes, the stage of ovarian development, and the relation of these to the probable age of captured females.

For the purposes of the studies five areas were chosen which reflect the coastal type of topography, the terrain being low, flat, and intimately associated with the old coastal swamps and bogs or swamp-grown currentless streams. In

addition, three areas were selected in which to investigate the effect of other topographical conditions on malaria incidence; in these attention was devoted to malaria existing in impounded and fluvial areas.

A preliminary analysis of the data collected shows clearly that *Anopheles quadrimaculatus* is the malaria vector of the region. The results of past studies in areas removed from sea-level have shown that in such localities *A. quadrimaculatus* breeds in ponds and is rarely found in permanent streams. The Edenton studies have shown that in the coastal areas permanent streams are important production areas. The reason for this is that these streams, being nearly at sea-level, have little current, and biologically show the characteristics of ponds.

Some interesting results were obtained in the studies of the nutrition of anopheline larvae in relation to their distribution in nature. It is well known that larvae of *A. quadrimaculatus* prefer the water of ponds, whereas the larvae of *A. punctipennis* prefer water which is in motion. The studies indicated that these species do not differ in the food elements which they withdraw from the water, both reaching maturity on the same diet. But despite this similarity of tastes the former species is generally found in ponds, where the variety of food is greatest, whereas the

latter matures in places where the diet is meager. The richer plankton of ponds is perhaps attributable to the greater warmth of the water. Thus one may adopt the tentative conclusion that the distribution of the two species is not controlled by nutritional factors; but that other factors, perhaps of a thermal character, exercise an important influence.

A program for anopheline control was undertaken by the Station and the town of Edenton. The work was carried out with a very small budget. No drainage was done and culicines were ignored. Paris green was relied upon to control Anopheles breeding. The actual per capita cost to the town was $.027. This experience indicated that the application of Paris green may be effected at a cost so low that it has distinct possibilities in selected rural areas. It also suggests that popular support of anopheline control is practicable in the United States.

In addition to the field research at the Edenton station, three members of the staff conducted malaria reconnaissances in southern Illinois, Oklahoma, and California at the request of the respective state health officers. These investigations have served a useful purpose in delimiting in a broad general way those portions of the state which have sufficient malaria to require special attention from the health authorities. They

should of course be followed by intensive surveys in those areas which are found to have a malaria problem.

In accordance with an agreement beginning July 1, 1925, and extending over a three-year period, the Board continued to assist in the operation of a training station in malaria control which has been established in Corsica under the direction of Dr. Emile Brumpt, professor of parasitology at the University of Paris. A malaria laboratory was installed in Bastia, on the grounds of the new municipal hospital. Twenty-four students from the School of Malariology of the Institute of Hygiene, Paris, took part in epidemiological studies during July.

In the course of the year a movement was started in Corsica looking toward the development of malaria control supported from local funds; public authorities and physicians rendered excellent cooperation. Modest but highly successful demonstrations of larva control by Paris green and Gambusia were made. An experiment in the use of Paris green along the lines followed at the malaria field station in Porto Torres, Sardinia, was conducted on the Canal du Grand Fassone. Previous to the application of Paris green, from 400 to 500 larvae per square meter were found; twenty-four hours later, only a single larva was obtained in the twenty square

Fig. 30.—Spreading Paris green on a lake in Fiumicino, Italy, to kill mosquito larvae.

Fig. 31.—Dipping for mosquito larvae in a stream in Fiumicino to determine the extent of Anopheles breeding.

meters explored, although above and below the experimental area the anopheline density was as great as on the previous day. Similar demonstrations in the town of St. Florent and in Ajaccio gave equally satisfactory results, indicating the possibility of controlling malaria in Corsica at a small cost.

The use of Gambusia also met with interesting results. In May, these fish were introduced into an Anopheles breeding-place, a clay pool near Bastia. They multiplied extensively, and within ten weeks no larvae could be found in the pool, although large numbers were obtained in near-by pools. A canal near the Grand Fassone was also selected for a demonstration in the efficacy of Gambusia. A breeding-place which showed from 200 to 400 larvae per square meter was shut off by a small dam, and fish were placed therein; an examination ten days later disclosed only a few larvae, and the Gambusia had multiplied. These fish were imported from Italy two years ago and thrive extremely well in Corsica. During the summer of 1926, Gambusia were distributed in nearly twenty new districts on the east coast of the island.

Laboratory Studies

During the year Hegner, in Baltimore, continued his studies of possible substitutes for

Fig. 32.—Ditch covered with cane-straw to prevent mosquito breeding and growth of vegetation, Porto Rico.

Fig. 33.—Determining incidence of malaria among children of a Porto Rico school by spleen examination.

quinine. Taliaferro, of Chicago, studied the possible use of the precipitin reaction in the diagnosis of latent malaria. The preliminary work

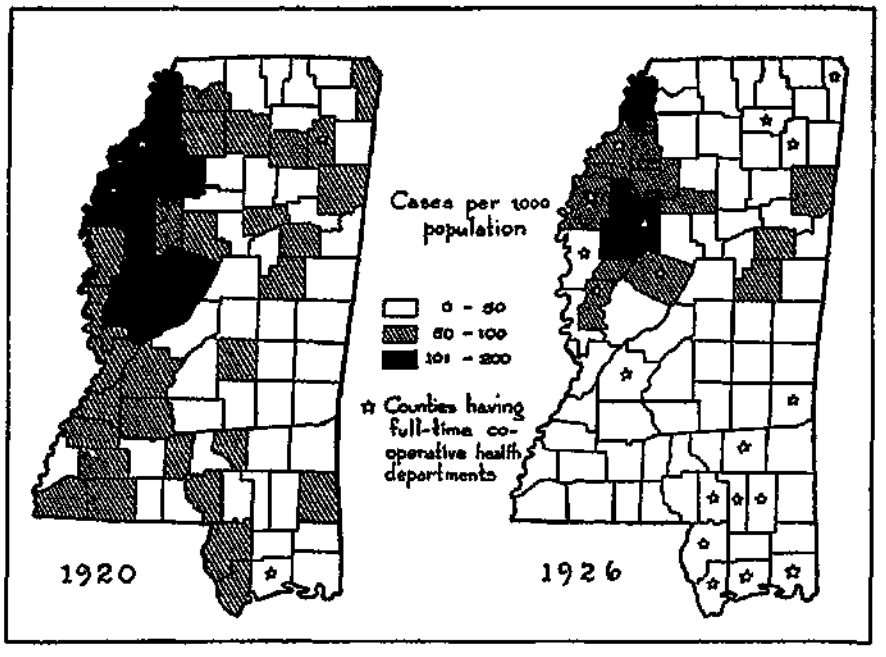


Fig. 34.—Cases of malaria per thousand population in Mississippi counties in 1920 and in 1926.

was done in Chicago, using bird malaria blood as the antigen with serum from cases of paresis under treatment with malaria plasmodia. The results were remarkably good and justified a further field test. During the summer Taliaferro worked at Tela, Honduras, with latent malaria, which had been naturally acquired; it was soon found that the bird blood antigen was too weak and that the diagnostic value of the test was no better than the thick film method. Nevertheless, the results were better than had

previously been obtained, and it is probable that the test can be still further improved.

Malaria Control in Rural Areas in the United States

The Board's malaria program in the United States was initiated in 1916 by field studies, and these have been continued throughout the years. When sufficient information had been accumulated to warrant the development of a program of control on an economical basis, such work was undertaken. First, a plan was formulated for cities, towns, and other areas with dense populations; and demonstrations of malaria control with the municipality and its environs as the unit were carried out in more than one hundred municipalities in many different localities during the years 1920–1922. The methods devised by the various interested public health organizations were tried out, and a standard method was evolved which has been used subsequently in all areas of the United States where malaria control is a problem. As a result of this work malaria has practically disappeared from the cities and towns of the republic. Furthermore, living conditions have been bettered, for it has been the almost uniform policy in municipalities to inaugurate general mosquito control and not limit control measures to destruction of the malaria-bearing mosquito, the Anopheles.

This greater comfort during the mosquito season often makes a deeper impression upon the inhabitants of a city or town than the disappearance of malaria, which though very obvious, is not so universal in its appeal.

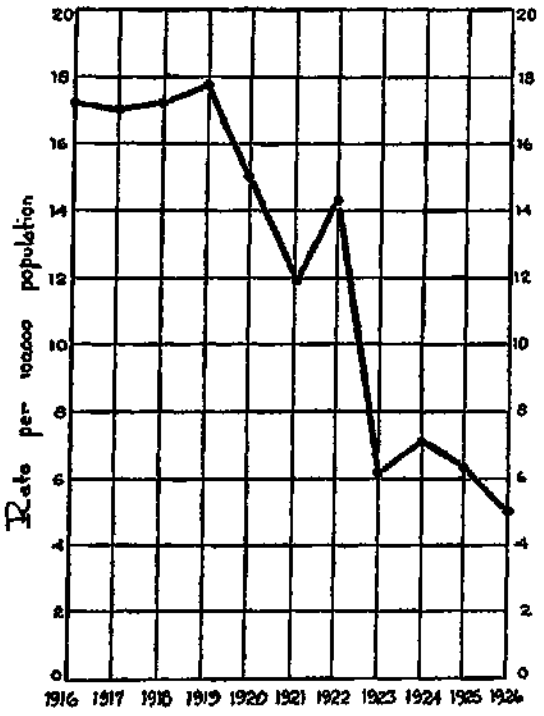


Fig. 35.—Decline in malaria death-rate in South Carolina, 1916–1926.

After satisfactory demonstrations that malaria could be controlled successfully and economically in areas of dense population and high per capita income, the Board withdrew from this activity and attacked the much more difficult problem of malaria control in rural areas where the population is sparse and the per capita income low. General mosquito control is not feasible under these conditions, nor did it even seem possible in many areas to control Anopheles. Further studies have indicated however that only one of the three common Anopheles in the United States, namely *Anopheles quadrimaculatus*, is responsible for the transmission of malaria.

Since the seasonal prevalence of this mosquito is known and also the preferential breeding-places, it is quite possible to concentrate on the destruction of this one species and to ignore all others, thus securing control of malaria at a reasonable cost even in sparsely settled areas. This information relating to the specificity of the type of Anopheles which transmits malaria in the United States has been the result in great part of studies made by H. R. Carter and confirmed by Darling. The significance of these observations is far reaching, for they resolve malaria control measures in the United States into much simpler elements and offer a very definite prospect that malaria control even in sparsely settled areas is feasible.

It is obvious that malaria control in rural areas will not be so rapid, so spectacular, or so complete as was the case in the demonstrations in municipal malaria control. The program can best be carried forward in counties having a full-time health service which is conducting all phases of health work and featuring malaria control only in those areas where it is of real economic importance. During 1926 the Board formulated a tentative plan of malaria control on the basis of the county as the unit. This program, which is a compilation of the experiences of successful malariologists and of public

health administrators versed in malaria control measures, is being tried out in various parts of the

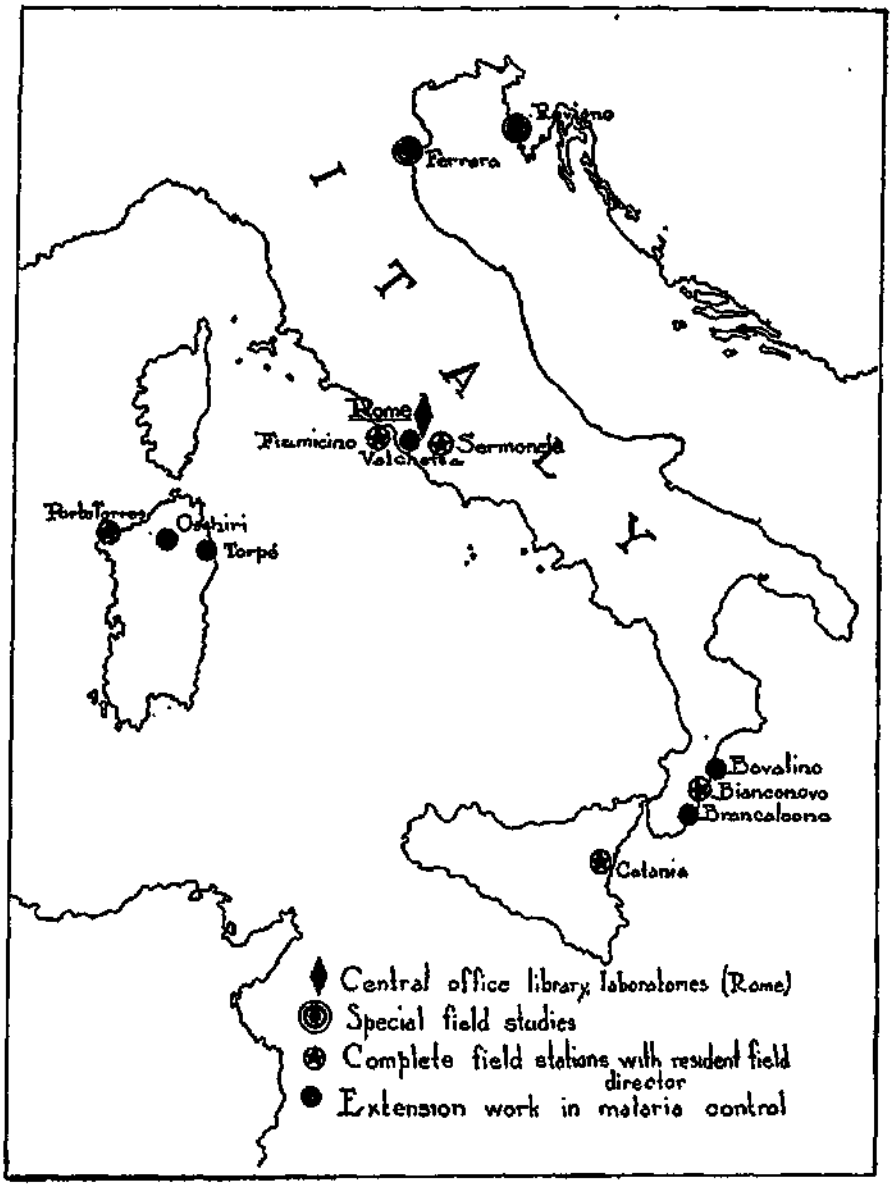


Fig. 36.—Areas of Italy, Sicily, and Sardinia, where demonstrations in malaria control are in progress.

Southern States. In 1926 the Board aided malaria control in the Southern States through contributions to the development of the central

health bureaus of seven states where malaria is a problem, and also through assistance to twenty-six county health unit budgets. While the results of the malaria work have not been spectacular, it is believed that the strategy is sound and, if continued systematically and persistently, is sure to result in a definite reduction in malaria in the rural districts.

Demonstrations in Italy

During 1926 the Board continued to cooperate with the Government of Italy in studies and demonstrations in malaria control. Three different types of work were carried out: (1) carefully controlled experiments in intensive antimalaria work in five different stations, with resident medical directors, technical assistants, visiting nurses, and field agents; (2) extension work under the supervision of these stations in five villages of the same regions to demonstrate practical malaria control at minimum cost; (3) studies in malaria epidemiology and the evaluation of certain special control measures in four different zones.

At the end of the year there were twelve field projects in operation, including two field stations organized in 1925 and ten organized in 1926. These stations are not all of equal importance and may be divided into three groups: (1) Field

laboratories of which there are five—Bianconovo in Calabria, Porto Torres in Sardinia, Catania in

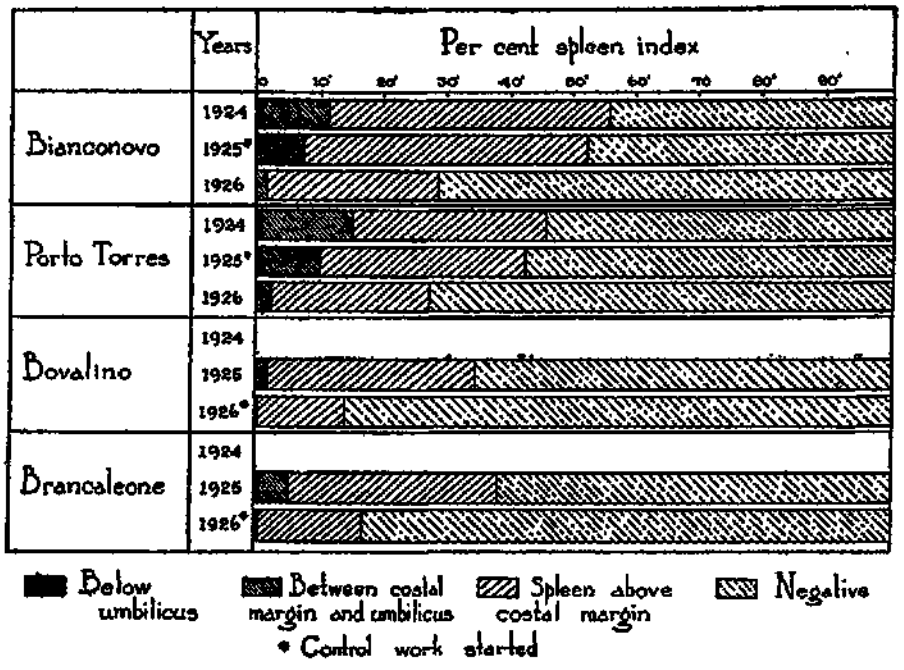


Fig. 37.—Spleen indices of persons examined in four areas of Italy before and after the inauguration of malaria control measures.

Sicily, Fiumicino in the province of Rome, and Sermoneta in the Pontine Marshes. The personnel of these stations includes a medical director, a visiting nurse, a technical assistant, and a man for the larva control work. (2) Units for extension work in malaria control in villages adjacent to the stations. There are five of these—Bovalino and Brancaleone adjacent to Bianconovo, Oschiri and Torpé near Porto Torres, and Valchetta near Fiumicino. (3) Stations for surveys and field studies, which were located at Ferrara and Rovigno.

The antimalaria activities of the field posts were limited to larva control and quininization. For larva control, reliance was placed on Paris green. Quininization was carried out by the stations as a campaign measure in four of the ten control areas. In Torpé quininization only was used. In Rovigno a study was made of the efficiency of Gambusia without other measures of control. Reduction in malaria following control measures was determined by means of parasite, spleen, and history indices. In Bianconovo in Calabria and Porto Torres in Sardinia, where stations were opened in March, 1925, the reduction in history index, in parasite index, and in number and size of enlarged spleens has been very striking. (See Figure 37.) Except in Sermoneta on the edge of the Pontine Marshes, which represents a special and difficult problem, the annual per capita cost of larva control ranged from 2.4 lire to 5.3 lire. Where quininization was a

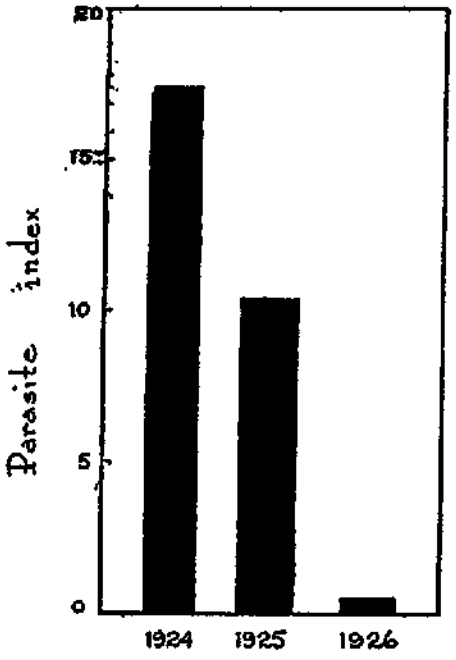


Fig. 38.—Reduction in malaria parasite rate in Bianconovo, Italy, following the inauguration of control measures in 1925.

campaign measure the per capita cost was over 6.4 lire. To date, the work seems to show that intensive quininization, even when carried out on

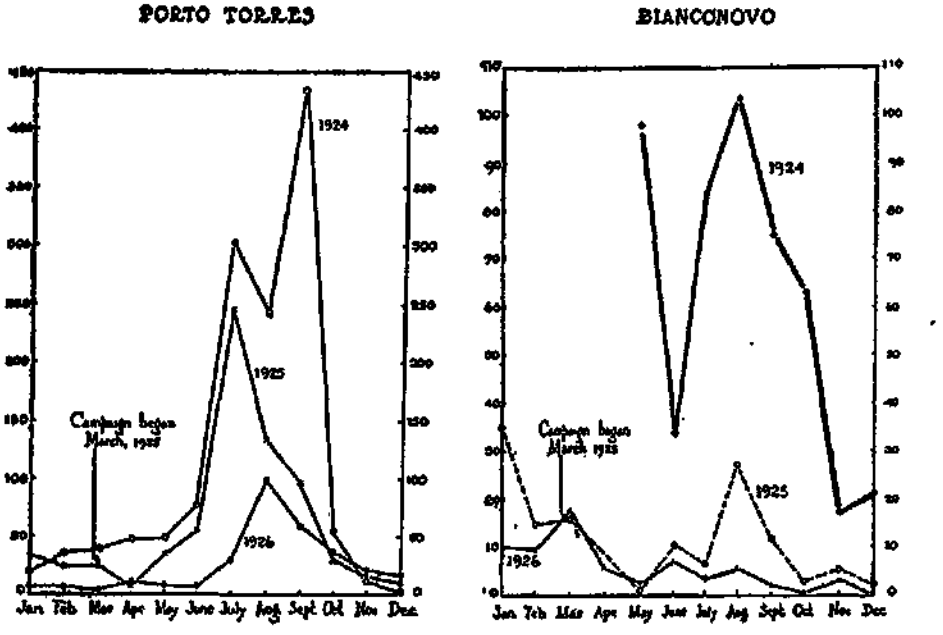


Fig. 39.—Reduction in the number of persons treated for malaria in the local dispensaries of Bianconovo, Calabria, and Porto Torres, Sardinia, following the inauguration of malaria control in these areas.

the smallest possible scale, is invariably more expensive than larva control. The work is still in its initial stages, and as it progresses the administrative procedures are being modified to suit local conditions. It is still too early to analyze the various factors in malaria control and their relative share in the reduction of the disease in the demonstration areas. At the present time the only conclusion that can be drawn is that endemic malaria is disappearing at an accelerated rate within the areas.

The central laboratory in Rome made a systematic study of Anopheles and conducted other entomological studies. In Sermoneta the effect of minimum doses of X-ray on chronic cases of malaria, with and without concomitant doses of quinine, was studied. In Ferrara there was a study of the epidemiology of malaria in connection with land reclamation on a large scale. In Rovigno in Istria, which is a limestone area representative of the entire Dalmatian coast, studies were made of the value of top minnows (Gambusia) in the reduction of Anopheles mosquitoes.

A Malaria Project in Porto Rico

The Board continued to assist the Insular Department of Health of Porto Rico in the malaria control demonstration undertaken at Fajardo in 1925. This area embraces a population of approximately eight thousand, living in a zone about four miles square. Careful observations were made of the extent of malaria in this area and also in a region surrounding the control zone including a population of approximately one thousand persons, in order to determine the comparative incidence of malaria in a controlled and a non-controlled area. Records were kept of the malaria morbidity from July, 1925, but anopheline control was not undertaken until the

beginning of the year 1926. In addition to the determination of the incidence of malaria, the anopheline density was measured by catches of both adult mosquitoes and larvae.

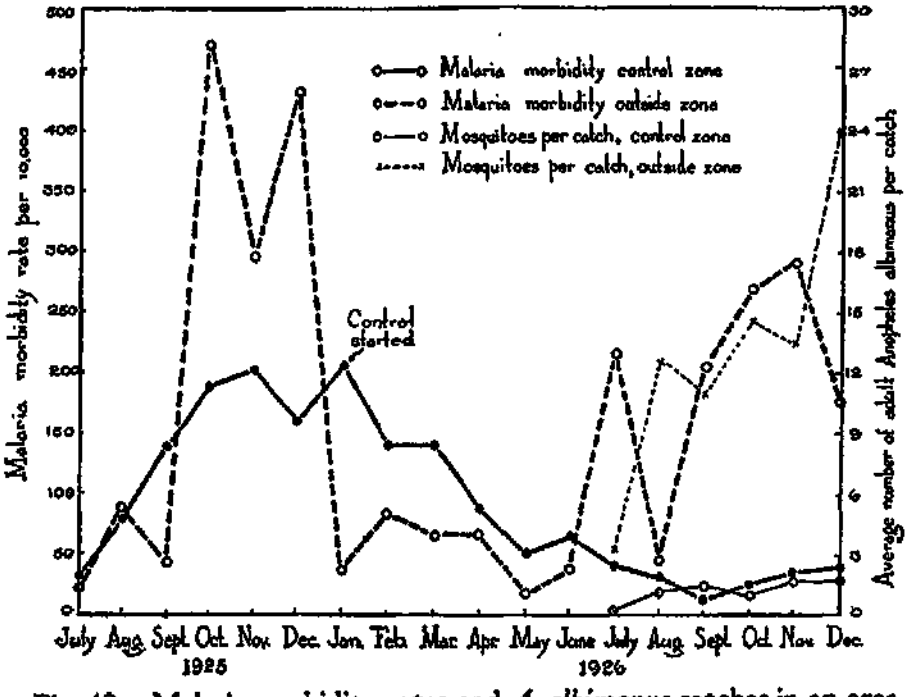


Fig. 40.—Malaria morbidity rates and *A. albimanus* catches in an area of Porto Rico in which malaria control measures have been conducted and in an area where no control work has been done.

The control methods employed were quininization and larva control. More than two-thirds of the persons suffering from malaria completed the standard eight-weeks' treatment, and of 757 persons examined after the treatment, 85.6 per cent were found negative. This procedure is expensive, however, and in view of the fact that antilarva work has been so satisfactory, increasing emphasis has been placed upon this phase of control. It is hoped that it may be possible to

dispense with treatment except in the case of those suffering acute attacks.

Careful study of the problem of the irrigated cane fields resulted in the correction of defects in the irrigation systems, and this has so improved the situation that irrigation water is now virtually eliminated as a source of Anopheles breeding. Since the irrigation season in Fajardo does not correspond with the active malaria season, irrigation has proved of less importance than rainfall as a factor in the spread of malaria. The observations indicate definitely that *A. albimanus* is the important vector of the area. Stagnation of rain-water has been prevented by careful attention to drainage outlets, and in view of the discovery that breeding of *A. albimanus* does not occur in the well-grown cane fields where water is shaded, some of the ditches have been covered with cane straw. (See Figure 32.) Little attention has been paid to swamps and other areas covered by heavy growth of trees which produced dense shade, for *A. albimanus* breeding does not occur in such places. The observations indicated that most of the breeding took place in water deposits at least partially exposed to the sun. Permanent water courses such as rivers, creeks, and swampy lands can be controlled at low cost by the regular use of Paris green; very little marginal cleaning is necessary. Paris green

was mixed with powdered lime and applied once a week until the advent of the cooler months, when the interval was lengthened to ten days or two weeks. This simple method of larva control was very successful. Both larva and adult catches were markedly reduced within the control area, whereas there occurred no change in anopheline density outside that area.

Coincidently, the records indicate a marked reduction of malaria in the Fajardo area during the year; 153 cases were reported in the last six months of 1926 as compared with 629 cases during the same period of 1925. On the other hand, the outside zone, in which no control measures were carried out, showed no appreciable decrease in malaria incidence.

A malaria survey of Salinas, which is located on the southern coast of Porto Rico, was undertaken by several members of the Fajardo staff with a view to controlling the severe endemic malaria of that area. As a result of this study, plans were formulated for the inauguration of a control campaign in the near future in which methods successfully employed at Fajardo may be tested.

A variety of field studies relating to malaria control were initiated in 1926 and will be continued during the coming year. Among the points which seem to warrant further study are the following: (1) feeding and resting habits of

Anopheles mosquitoes; (2) infectivity rates in species of Anopheles found in Porto Rico, viz., *A. albimanus* and *A. grabhamii;* (3) the habits of mosquitoes, with reference to improvement in methods of determining their density; (4) methods of control in mangrove swamps, particularly as to the value of automatic tide gates; (5) the relative value of the more important varieties of screening material in localities near the ocean; (6) the feasibility of the simultaneous control of mosquito breeding and the growth of vegetation in ditches, by covering ditches with cane straw supported by mangrove sticks; (7) the value of a gate constructed at a point in a creek and permitting flow of water in either of two directions to control breeding by having the water change its course at short intervals.

Continuation of Control in the Philippine Islands

During 1926 the Board continued its cooperation with the Philippine Health Service in the development of a malaria program. The program included control demonstrations, field research in malaria, and malaria surveys, as well as the training of medical and subordinate personnel for the newly created Malaria Control Section of the Health Service.

Demonstrations in the Pampanga Province met with striking success during the year. The

essential method of control was the use of Paris green as a larvicide. No attempts were made to clear the streams; thus the work was conducted

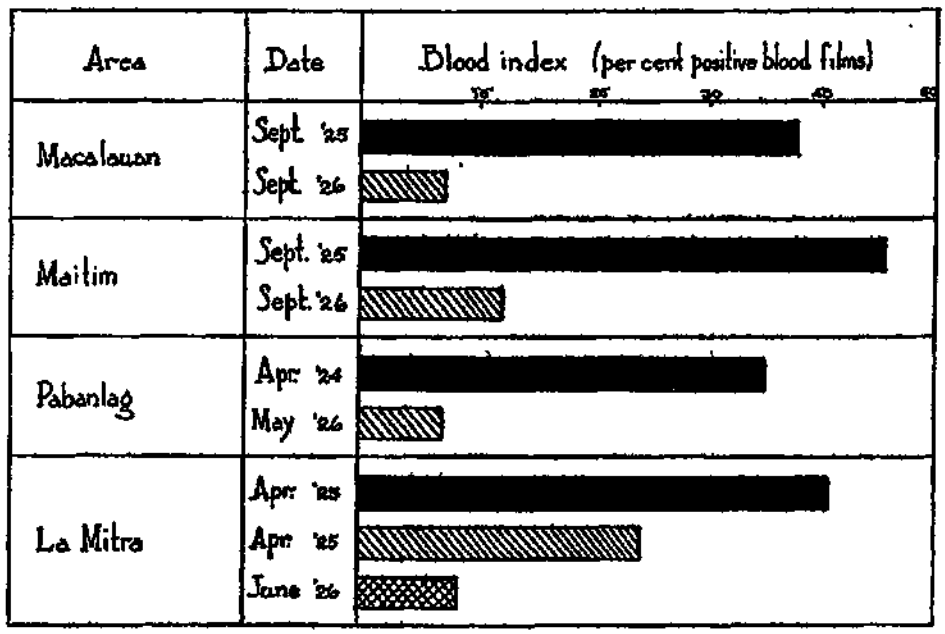


Fig. 41.—Reduction in malaria in four areas of the Philippine Islands following introduction of control measures. Work was begun in Pabanlag and La Mitra in June, 1924, and in Macalauan and Maitim in September, 1925.

at an extremely low cost, with gratifying results. There occurred a reduction in malaria of over 82 per cent in La Mitra area, of 87 per cent in Pabanlag, of 91 per cent in Porac, and of 84 per cent in Florida Blanca. The malaria incidence both before and after control was determined by history, spleen, and blood indices; the findings by all three index methods were strikingly consistent.

In Laguna Province control measures were continued on the sugar haciendas. Five control areas were established covering Macalauan,

Mabacan, Malanday, Masaya, and Maitim. The work was instituted at the request of the hacienda managers, who have suffered great economic loss through the prevalence of malaria among the laborers during the cane-cutting season, November to June. Control work in this area was started in September, 1925. During 1924, there were 836 cases of malaria treated at the Calauan Hospital, which serves these areas; in 1925 there were 994 cases treated at the hospital, and in 1926 only 305 cases, or less than one-third the average number for the previous two years. The reduction in cost of hospital treatment alone was ten times greater than the actual cost of malaria control measures in the area. Late in 1926 the malaria program was further extended to the Island of Mindoro.

Preliminary malaria surveys were made in Santa Maria in the Laguna municipality and in four municipalities of the island of Mindanao, namely Lawayan, Kiamba, Glan, and Davao. Extensive field studies were carried out in various places to determine the breeding habits of Anopheles mosquitoes. Some very interesting data were obtained on the differentiation of the larval characteristics of the prevalent anophelines of the islands.

A special section, designated as the Malaria Control Section, has been established in the

central office of the insular health service to take care of all parts of the islands. About $50,000 has been appropriated for the work of this section, to become available in 1927. Beginning in 1927, therefore, the Philippine Health Service will assume charge of malaria control, and the Board's aid will be confined to field studies. The Board's representative has aided in training field personnel for the control service; four physicians, one sanitary engineer, four field inspectors, and three technicians received instruction in 1926.

Control Work in the Argentine

Following a preliminary survey of malaria in the provinces of Tucuman, Salta, and Jujuy, Argentina, malaria control measures were initiated in the province of Tucuman under a five-year cooperative program, which went into effect January 1, 1926.

The two towns of Medinas and Concepción were selected for demonstration purposes. A careful preliminary study of malaria incidence was made in Medinas by means of history, spleen, and blood indices. Studies of anopheline density were made in the houses and in the open; mosquito-breeding foci were located and the relationship between the various species of Anopheles and the malaria incidence was investigated. It was demonstrated that *Anopheles*

pseudopunctipennis was the immediate vector of the disease, and species control was begun. All the methods for controlling Anopheles mosquitoes were used, including both closed and open drainage, filling, and the use of Paris green, oil, and top minnows. A stock of quinine was furnished by the Government for the treatment of cases of malaria in the area. Control work was completed by July 1. Results were very satisfactory; the spleen rate showed a reduction of about 60 per cent and the parasite index was reduced from 11.2 to 6.75. Control operations were then begun in Concepción, a town some eleven kilometers distant, where previously control measures had been limited to quininization.

Probably the most valuable work of the year was the epidemiological studies conducted by the Board's representative and R. C. Shannon, of the United States Bureau of Entomology, whose services as entomologist were lent to the Argentine Department of Health and who has been working in conjunction with the malaria program in Tucuman. The establishment of *A. pseudopunctipennis* as the chief vector of malaria in Tucuman has simplified the administrative procedures in malaria control, and it is anticipated that the demonstration will have an influence on similar work which is under way

in other parts of the country. The demonstration in subsoil drainage has also been of considerable value.

A Four-Year Cooperative Program in Brazil

The Board concluded its malaria field studies in Brazil June 30, 1925. Since that time it has not contributed toward control maintenance in areas where these studies were conducted, but conservation has been directed by the newly formed Malaria Service of the state of Rio de Janeiro. The four-year cooperative control program inaugurated in the state of Rio de Janeiro in January, 1925, was continued. Control campaigns were completed in three areas, Itaperuna, Macahé, and Mesquita. Control of Anopheles larvae was secured by the use of oil and Paris green, and quininization of all recurrent infections was carried out. The most important control measure, however, was drainage. This included both open ditching and a considerable amount of closed drainage by means of tile. The principal post is that at Macahé which is serving as a model for the state.

Two new areas were opened, Capivary and Conceição de Macabú. Here ditching and tiling have been carried out, and the permanent control work is progressing satisfactorily. Control measures are checked by catches of larvae and

Fig. 42.- A stream in Tucuman, Argentina, where Anopheles mosquitoes bred in large numbers.

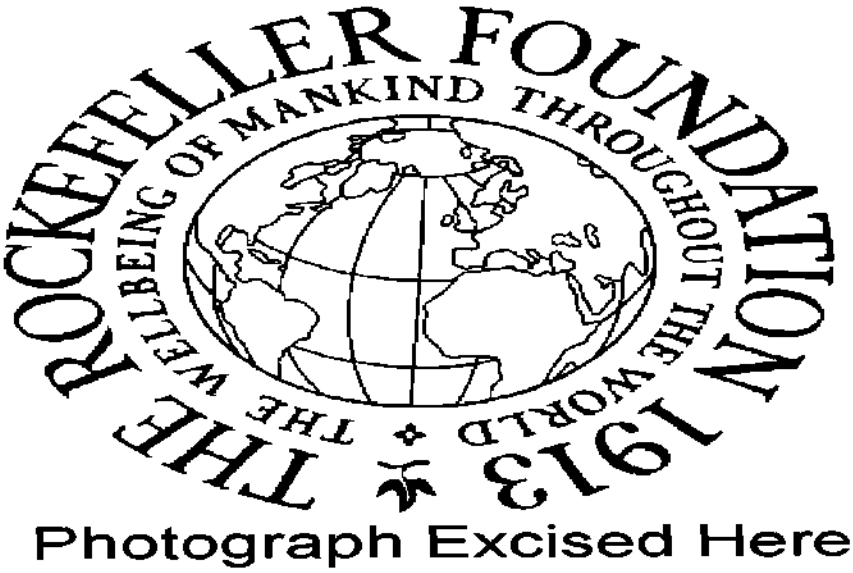


Fig. 43.—The same stream after it had been cleared of vegetation as a malaria prevention measure.

adult Anopheles. The reduction in mosquito breeding which has been secured has been satisfactory. It is too early as yet to make an accurate estimate of the extent of malaria reduction, but present indications are encouraging.

Preliminary Work in Panama

In 1926 a malaria survey was completed in Aguadulce, Panama, with the assistance of a representative of the Board, and the Government approved plans for the installation of a drainage system in the city of Aguadulce and the adjoining village of Pocri.

In several schools of Panama an effort is being made to reduce malaria among the pupils through the daily administration of quinine by the teachers in accordance with instructions received from the Director of the Division of Child Welfare and Medical Inspection of Schools. This Division has collected data relative to the incidence of malaria in the provinces, based on splenic indices of the children. Examination of over 22,000 children in nine provinces disclosed the fact that nearly 61 per cent of these had definitely enlarged spleens.

Control Measures in Nicaragua

Malaria control measures in Nicaragua during 1926 were limited to work in Rivas, Granada,

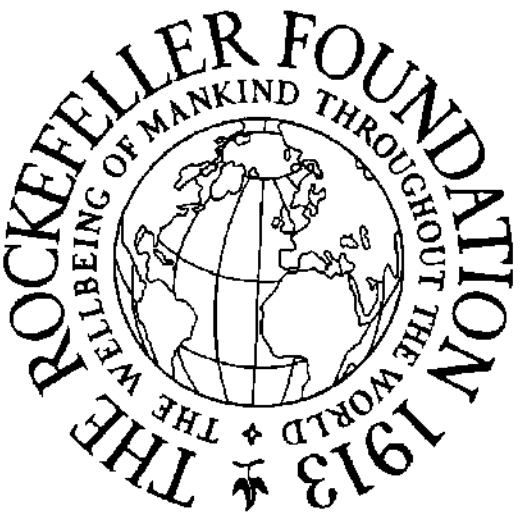


Fig. 44.—Type of drainage ditch being constructed in Brazil as a part of the malaria control program.

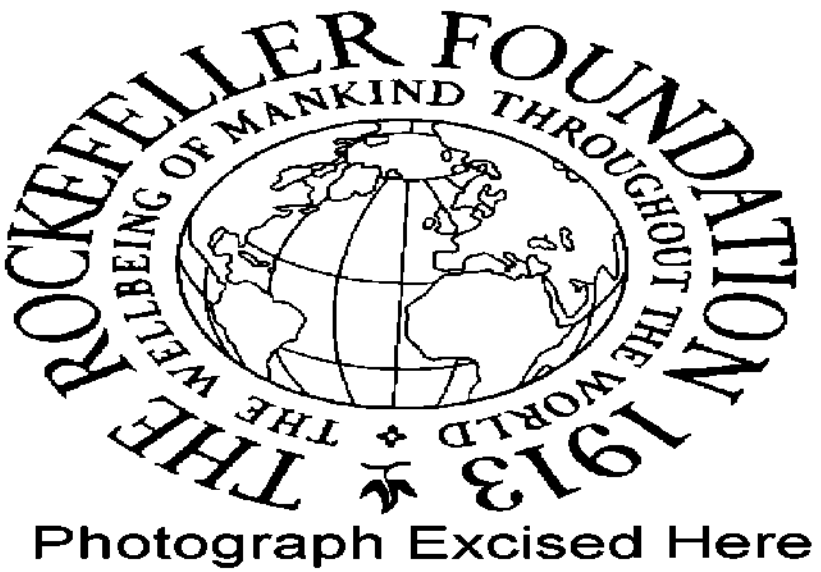


Fig. 45.—Nursery for top minnows used in mosquito control.

Corinto, San Juan del Sur, and the city of Managua. Results in Corinto were so satisfactory that the city is now practically free from malaria. In Managua it was found that oiling and draining were not sufficient to control Anopheles breeding. Paris green was introduced as a measure of control with extraordinary success and at the relatively low cost of five cents per capita per year. It is estimated that a per capita cost of ten cents will eliminate malaria from the city of Managua through the extensive use of Paris green on the lake front.

Palestine

On invitation from the Government of Palestine a sanitary engineer experienced in malaria control has been lent to that country to assist in putting into effect the measures for control which were indicated by the survey previously made by the Board's representatives. The engineer will concern himself chiefly with advising the Government in relation to malaria control in the public lands which are being settled. He will also assist in transferring the responsibility for malaria control from the central health service to the health officers of the various districts that it may become part of the routine health work. Before the close of the year he completed surveys of two areas, undertaken at

the request of the Director of Health preliminary to extensive drainage measures.

Cooperation in Spain

The study of malaria prevalence in Spain, made by the Board's representative early in 1926 in conjunction with a general public health survey of the country, showed Caceres to be the most heavily infected of the provinces, furnishing approximately 20 per cent of the 300,000 cases of malaria reported to occur in Spain each year. A cooperative program for the control of the disease in this province was undertaken on July 1 by the Board and the Malaria Commission of Spain, a bureau of the National Health Department. Intensive field studies were begun which included a detailed epidemiological study of the infected areas and a comprehensive investigation of the use of Paris green as a larvicide in two districts. A portable laboratory service was established in a mountainous malaria area which included ten towns. The success of the Paris green work was so pronounced as to indicate its feasibility as a control measure on a large scale. The effect of Gambusia in mosquito control is also being studied.

At the malaria field station a theoretical and practical training course in malaria work is provided. Twelve student officers of the Madrid

School of Public Health were given a course of training by the Commission at Navalmoral de la Mata.

Malaria Training in the Mokotow Demonstration Unit, Poland

The Mokotow Health Demonstration which is being conducted in the city of Warsaw with the assistance of the Board, continued to provide training facilities in practical malaria work for students at the School of Hygiene, Warsaw, and for other persons interested in public health activities.

Field activities included the examination of types of breeding-places, dipping for larvae, and their identification. At the health center, 882 school children were examined for enlarged spleens, which were detected in thirty-six cases.

VII

Yellow Fever

Recrudescence of the Disease in Brazil

Yellow fever appeared in epidemic form in the states of Bahia, Minas Geraes, Rio Grande do Norte, and Parahyba, Brazil, during 1926. Measures for the control of this disease had been inaugurated in Brazil in 1923 with the help of the Board. By the close of 1925 reports of cases had practically ceased, so it was felt that the

antilarva activities in several of the coast cities might safely be discontinued; but early in 1926 stations were still being maintained in the three large coast cities of Fortaleza, Ceará; Recife, Pernambuco; and São Salvador, Bahia.

Yellow fever campaigns are carried out along lines first laid down by H. R. Carter, who pointed out that if the permanent endemic foci of infection were eliminated the disease would die out in smaller communities for lack of the human host. Antilarva activity in Brazil was therefore concentrated in the larger coast towns. These have been the endemic centers from which the disease has spread, and when they have all been under control for a sufficient period the disease should disappear, unless in the meantime other endemic foci are revealed.

The fundamental basis of the yellow fever control campaign is the fact that endemicity can continue only in the joint presence of a large number of non-immune persons and a large number of mosquitoes of the species *Aëdes aegypti* (Stegomyia). During a campaign there is always the possibility that smoldering infection may travel from one village to another, but ample observation has shown that these embers burn out eventually. It has always been recognized that this plan of campaign would not apply under abnormal conditions, as for example, rapid

migration of a normally stable population or a situation such as might be brought about by political disturbances involving the introduction of many non-immune troops into areas in which the disease might still be present; this latter condition of affairs arose in Brazil late in 1925 and early in 1926.

A band of rebels worked its way north from Southern Brazil in 1925 into the old yellow fever area. It continued its depredations until February or March, 1926, when it was driven out of the country by federal and state troops. Both rebels and troops made rapid advances from post to post and there was some migration among the inhabitants in the country through which they moved. Information gathered by the field staff of the Yellow Fever Commission after the disturbance had subsided shows that some of the federal troops, composed for the most part of men who were non-immune to yellow fever, became infected and that several of the men died in the hospitals of the principal cities, furnishing presumptive evidence that smoldering infection still existed in the interior which was augmented and spread by the passage of troops through the area.

The first case of the disease was reported from the seaport town of Natal, Rio Grande do Norte, in March. This was followed in April by the

report of a sharp outbreak in Parahyba, the capital of the state of Parahyba, also a coast town. Antilarva work was resumed at once in both towns, and by the middle of May the situation was again well in hand. In the meantime rumors began to arrive of outbreaks in the towns along the railroad from São Salvador to Joazeiro in the state of Bahia, and along the caravan routes south of Bomfim. Early in May a resident of São Salvador died of the disease. It was then learned that sick soldiers had been passing through the city and that some had died of yellow fever at the military hospital. Later the disease was reported from Pirapora, Minas Geraes, the northern terminus of the railroad connecting Rio de Janeiro with the São Francisco valley.

The comparative freedom from infection of the large coast cities in which antilarva measures were in force was an indication of the effectiveness of control work and gave a feeling of security both to the people and to the members of the yellow fever staff, for in former years these cities had been the center of epidemics.

Intensive antilarva work has been maintained in all the larger centers of population as well as in many of the smaller towns which, by reason of their location on well-traveled highways, might be agents for the propagation of the disease. Yellow fever is still present in the country,

as the occurrence of a few scattered cases indicates, but with the reduction of the larva index to a point well within the limits of safety in all the key towns, the danger of another general outbreak is minimal. Except for the cases in Brazil no yellow fever was reported in 1926 in the American continents or in neighboring islands.

Preliminary Studies in West Africa

The West Africa Yellow Fever Commission was organized in 1925 for the purpose of studying yellow fever on the west coast of the African continent, in order that, if it seemed feasible, an attempt might be made to eradicate the disease from this region. Prior to undertaking control work, it was necessary (1) to learn the characteristics and epidemiology of the disease in West Africa and its relationship to the fever of the Western Hemisphere; (2) to attempt the isolation of the organism which causes the disease; (3) to discover the method of transmission; and (4) to identify those areas in which the disease is continually present.

The Director of the survey arrived in Lagos, Nigeria, in June, 1925. The remainder of that year was devoted mainly to securing personnel and to importing and constructing the buildings and equipment necessary to provide living quarters and laboratory facilities for an adequate

working staff. By the end of the year the laboratory was in operation, and survey groups

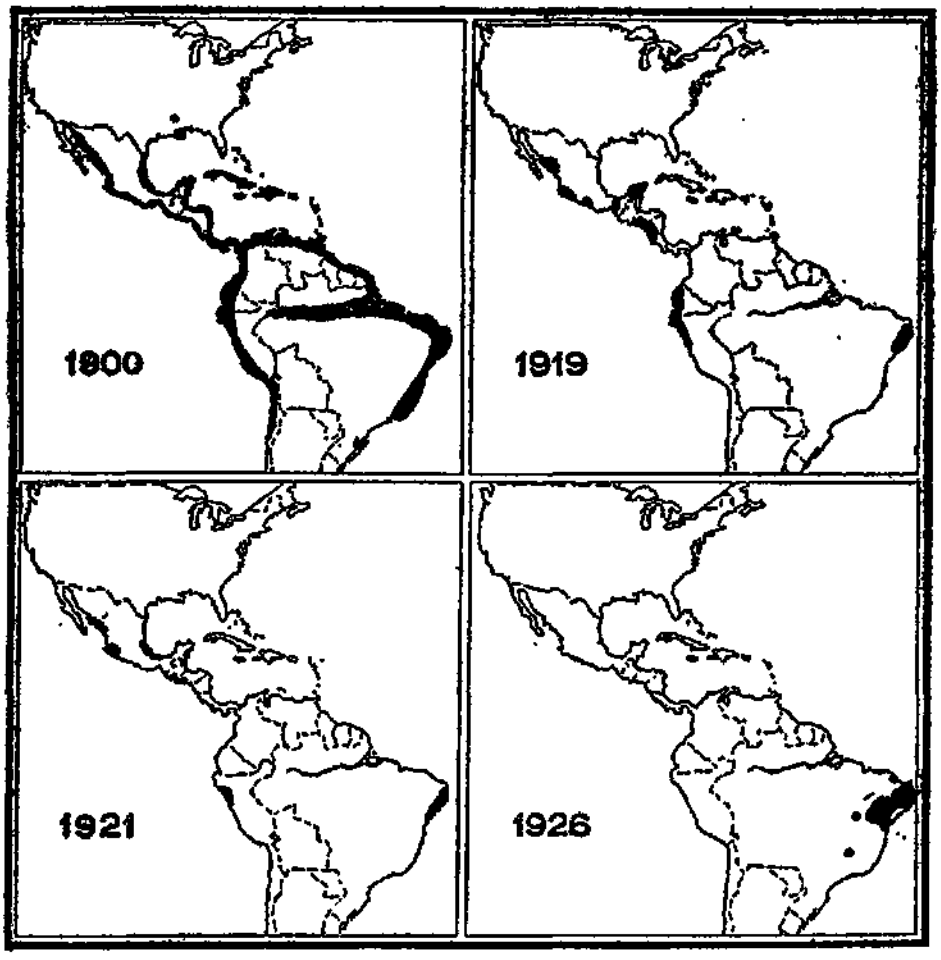


Fig. 46.—Decline of yellow fever in the Western Hemisphere during the last quarter-century.

were beginning field studies in Nigeria and on the Gold Coast. There were eight members on the scientific staff of the Commission, including the director, a pathologist, an entomologist, and a laboratory technician at headquarters and three medical men and a sanitary inspector in the field. This number had been increased to ten by the end of 1926.

Surveys were made in Southwestern Nigeria, the Niger Delta region, and the Port Harcourt area in Nigeria, and on the Gold Coast. The field men were constantly on the lookout for suspicious cases among the natives, for if yellow fever is endemic on the West Coast, it must be continually occurring, probably in a mild form among the native children. The surveys also included the collection of data on population, the movement of people, previous histories of yellow fever, and the amount of mosquito breeding, particularly of *Aëdes aegypti*, which is known to be the sole vector of yellow fever in the Americas. In addition, studies were made of types of mosquito breeding-places, and information was obtained regarding the living habits of the people, especially in relation to their domestic water-supplies.

Through the courtesy and cooperation of the British authorities, members of the Commission were notified of suspicious cases occurring during the year, both in Nigeria and on the Gold Coast. Early in the spring there was an outbreak in Nsawam on the Gold Coast. In spite of the strict quarantine and active sanitary measures which were carried out, it is probable that this infection was transmitted to Asamankese, a native town of five thousand inhabitants, twenty-nine miles northwest of Nsawam. Several of the

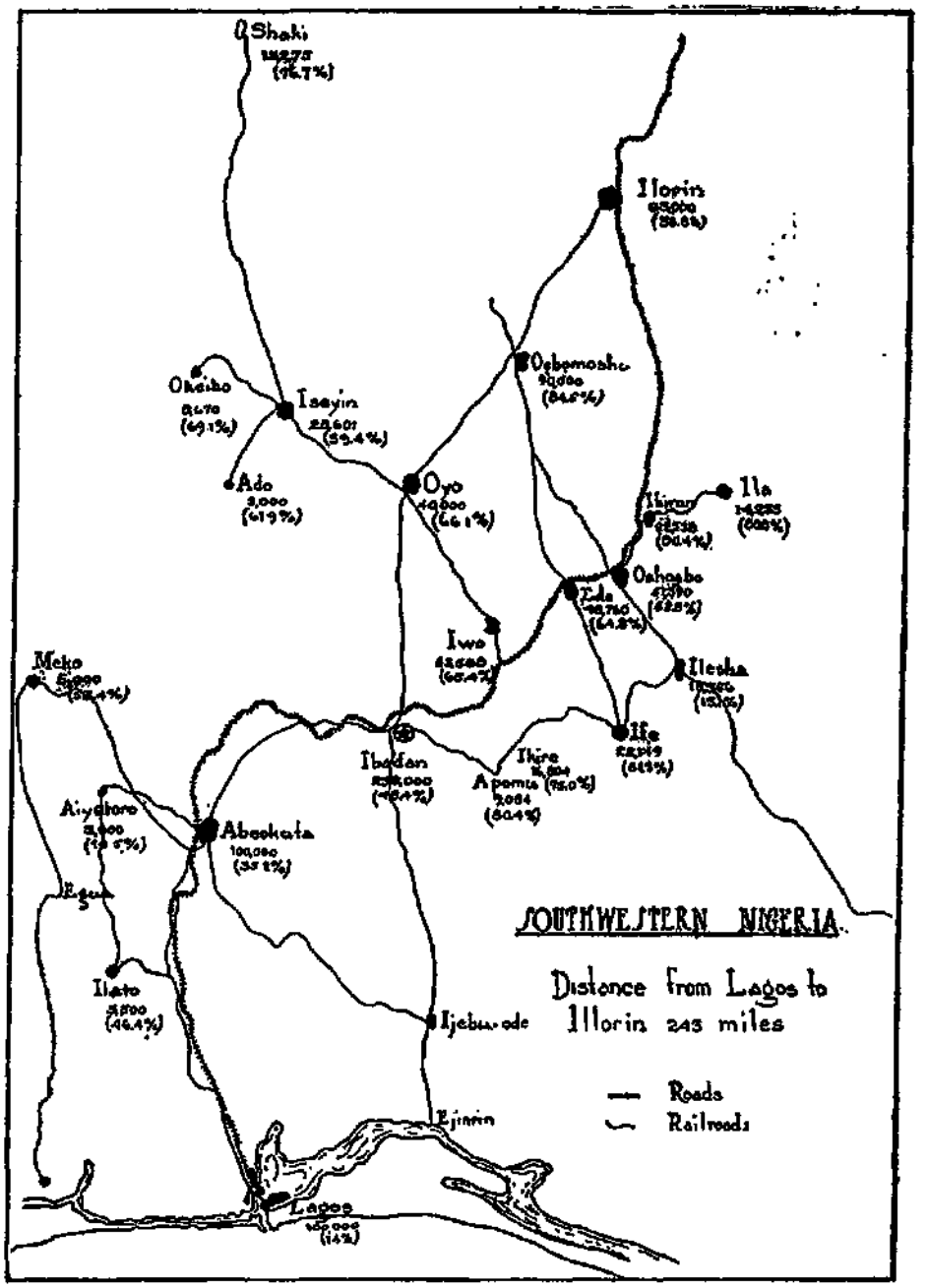


Fig. 47.—Map of Southwestern Nigeria showing towns in the vicinity of Ibadan, with their populations and the percentage of homes at which larvae of *A. aegypti* were found.

members of the Commission visited Asamankese during the summer to observe the cases and

considerable material for culture and further study was secured.

Several cases of yellow fever were reported from Lagos during the year, all of which were seen by members of the Commission. The clustering of these cases along the water-front in the midst of the native settlement is the interesting epidemiological feature of this outbreak.

Other cases occurred in Nigeria at Warri, Benin City, and Oshogbo; on the Gold Coast at Accra, Cape Coast, and Salt Pond; and at Porto Novo, Dahomey. Most of them were investigated by members of the Commission. Late in the year news of an outbreak in Senegal was received, but because of the distance from Lagos and the difficulty of transporting the laboratory equipment needed for the study of cases, no attempt was made to investigate this epidemic. Tissues from some of the fatal cases were sent to Lagos through the courtesy of the French Medical and Sanitary Service at Dakar, Senegal, for study by the Commission's pathologist. Figure 50 on page 230 shows the areas in West Africa from which yellow fever was reported in 1926.

Results of the West African Studies

The surveys conducted on the Gold Coast, including the Northern Territories, showed a

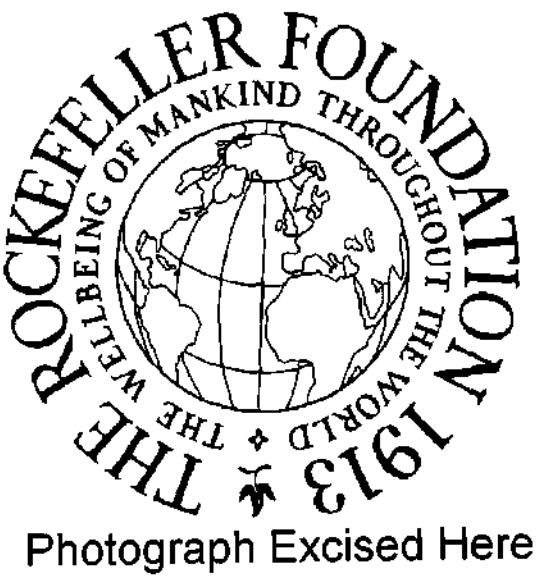


Fig. 48

Fig. 49

Two sources of mosquito breeding in West Africa: (Fig. 48) earthenware jars used for storing water in the homes: (Fig. 49) boats in which water is allowed to collect.

relatively low *Aëdes aegypti* index in most of the communities which are large enough to serve as endemic centers of yellow fever. Conditions found on the Niger Delta and in the Port Harcourt area suggest that this region might give rise to cases of the disease if infection is introduced, but the area probably does not constitute a permanent focus of infection. Although the larva index is high, the population is scattered and intercommunication is difficult. Southwestern Nigeria, on the other hand, presents a different picture. The towns and cities about Ibadan, which itself has a population of about 250,000, contain several millions of people living under native administration in crowded, primitive conditions. Throughout this region the larva index is high. There are few Europeans and not many trained medical men. The natives prefer their "ju ju" or witch doctors to the European physician, and it is difficult for the white physician to get in touch with them. If the disease is present among the natives, this area might well be a vast endemic focus from which infection might be carried from time to time to other centers, appearing in sporadic cases among the susceptible Europeans.

The results of the studies are as yet inconclusive. *Aëdes aegypti* is present in sufficient numbers to serve as vector. The apparently

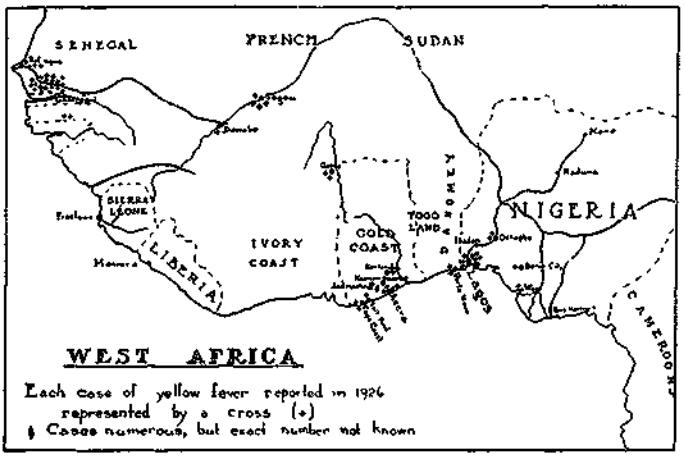


Fig. 50.—Map of West Africa showing areas from which yellow fever was reported in 1926.

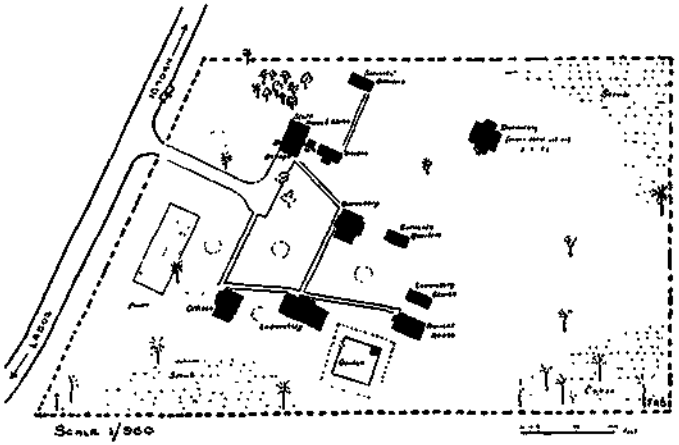


Fig. 51.—Plan of the headquarters of the Board's Yellow Fever Commission to West Africa, at Yaba, near Lagos, Nigeria.

sporadic occurrence of the disease might be explained by local conditions. As yet endemicity of the disease among the native population has not been established. Attempts to isolate the infective organism or to transmit the disease experimentally have been negative and the serological tests only slightly suggestive. Before inaugurating control measures on the West Coast of Africa, therefore, further studies must be made of the nature of the disease and of the conditions under which it is maintained and spread.

VIII

Public Health Education

One of the most important fields of the Board's work is public health education. Well-trained personnel are essential to the development of any public health enterprise. In some instances health projects require highly technical training, as for example, sanitary engineering, malariology, vital statistics. Other types of work require broad general training in public health; others necessitate training in administrative procedure.

During 1926 the Board aided a variety of projects in the field of public health education. Assistance was given to schools and institutes of hygiene, to schools of nursing, toward the teaching of public health in medical and other schools, and toward the establishment of field stations for

practical training. Fellowships in schools of public health were granted to government appointees destined to occupy important official positions in the health services of their own lands. In addition, the Board has aided in the development of public health methods by providing for the interchange of ideas through the visits of leading health officials to other health organizations in their own and foreign countries.

Aid to Schools and Institutes of Hygiene

During 1926 the Board made grants for land, buildings, equipment, maintenance, or endowment to eleven schools or institutes of hygiene and public health in ten different countries. In **England** the Board continued to provide for the current operating expenses of the London School of Hygiene and Tropical Medicine, the corner stone of which was laid on July 7, 1926; operating expenses will be assumed by the Government, however, when the building is completed. A total pledge of $2,330,000 has been made toward land, building, and equipment for this school. A report of the Division of Tropical Medicine of the school for the academic year ending July 31, 1926, shows an enrollment of 154 students, representing twenty-one different countries.

In **Brazil** final approval has been given for the construction of a new Institute of Hygiene at

São Paulo, as a part of the joint project for the development of the Medical School of São Paulo and the present Institute of Hygiene. The Board has pledged $165,000 to erect and equip the new building.

In **Canada** the School of Hygiene and Public Health of the University of Toronto, which has received assistance from the Board, is nearing completion. During the academic year 1926–1927, thirty-eight graduate and two hundred and two undergraduate students were given instruction in hygiene and preventive medicine.

In **Czechoslovakia** four main buildings of the State Institute of Public Health at Prague have been completed. The period of the cooperation of the Board with the Government of Czechoslovakia has been extended for two years in order to provide for the construction of the fifth and largest building. In **Denmark** the Board contributed toward the building of a new wing of the laboratory of the State Serum Institute in Copenhagen. This was virtually completed by the end of the year. In **Hungary** the Institute of Hygiene at Budapest has been under construction during the year and will soon be in operation; the Board has contributed toward the construction and equipment of the building.

In **Norway** the State Institute of Hygiene at Oslo was practically completed during 1926, and

in **Poland** the School of Hygiene of the State Institute of Hygiene at Warsaw was completed and was formally opened on April 20. The Board will continue to provide for the salary of the biochemist of this school until the fall of 1927. During the year courses were given at the school for health officers, physicians, sanitary engineers, midwives, school teachers, and social workers. In **Yugoslavia** the Central Epidemiological Institute at Belgrade received a grant for necessary equipment, and aid was given toward the construction and equipment of the new School of Public Health at Zagreb.

During the year the Board made its final payment on the $125,000 pledge, extending over a five-year period, toward the operating expenses of the School of Public Health of Harvard University, and also contributed $25,000 toward the permanent endowment of the school.

Teaching Public Health

In **Brazil** the Government created a graduate course in hygiene and public health in the Faculty of Medicine of Rio de Janeiro, in order to provide trained workers for the rapidly expanding Federal Rural Sanitary Service. At the request of the Government, the Board lent personnel for a six months' period to assist in the development of this course, which was inaugurated

in April, 1926, and will continue for a twelve months' period. The curriculum includes industrial hygiene, sanitary engineering, public health administration, epidemiology, vital statistics, and child hygiene. Three of the teaching staff were former International Health Board fellows. Sixteen students matriculated. In **Trinidad** the Board continued to assist in the maintenance of a chair of sanitation and tropical hygiene established in the Imperial College of Tropical Agriculture in 1925. There were approximately fifty students enrolled in this course, of whom thirty-four did postgraduate work. In **China** the Board continued to lend the services of its representative as professor and head of the department of hygiene and public health of the Peking Union Medical College.

During 1926 visiting professors were exchanged between the department of protozoology of the Johns Hopkins School of Hygiene and Public Health and the department of protozoology of the London School of Hygiene and Tropical Medicine.

Field Training Station in Alabama

The Board's Field Training Station in Alabama was established primarily to provide preliminary field experience for prospective members of the Board's staff. Upon insistent requests from state health officers, the scope of

the station has been enlarged to include field training for future staff members of various official health agencies, and this function has now become its most extensive and perhaps most important one.

In order to meet the increased demands of a larger group of students the station has been transferred to Montgomery. There, through the courtesy of Dr. S. W. Welch, the state health officer, the facilities of the State Board of Health have been made available. The training station is not a school of didactic instruction and assigned duties. The persons in training, under the supervision of the Director, take an actual part in the official health activities of the State Board of Health. Usually each completes a health survey of some community and submits a report with recommendations. He then spends a month or more in one of the organized rural counties and finally correlates this training with one week's observation at the central bureau.

During 1926 six members of the Board's regular staff spent an average of forty-seven days each at the training station. Eighteen of the special staff remained for three months each. Most of these men have accepted positions of responsibility in various types of public health work in seven different states. In addition

eleven states sent twenty-nine members of their own staffs to the station for field training. These men spent an average of forty days there. In the course of the year the station was visited by twenty-seven public health officials from various parts of the United States and by seventeen foreign visitors from Nicaragua, Brazil, Spain, Japan, Porto Rico, Italy, Colombia, Rumania, Bulgaria, Austria, Norway, and Canada.

The station rendered an important service to the State Board of Health in making complete and detailed health surveys of some twenty-one cities and towns, representing a house-to-house canvass and inspection of more than sixteen thousand premises. The work of the station has so increased in volume and importance that it has been considered advisable to establish a similar station in another part of the United States where the type of public health organization and scope of the problems encountered are somewhat different from those of the Southern States.

Travel Aid to Health Officials

Exchange of ideas concerning public health administrative procedures and technical methods is stimulating to health officials. To further such exchange of knowledge and suggestion the

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Fig. 52.—School of Hygiene of the State Institute of Hygiene, Warsaw, Poland, which was formally opened April 20, 1926. The Board has aided in the establishment of this school.

Photograph Excised Here

Fig. 53.—New wing of the State Serum Institute, Copenhagen, Denmark, toward the building of which the Board has contributed.

Board grants funds to enable health executives to visit other areas in order that they may learn what officials are doing in different parts of the world. In the United States in 1926 this aid was limited to state health officers or their accredited representatives; in Canada it was extended to health officers and public health nurses. Opportunities for study visits were provided for sixteen health officials from nine different states in the United States and from three provinces in Canada, namely Quebec, Ontario, and British Columbia. Six public health nurses from the province of Quebec also visited the United States for preliminary training before taking up their work with the three rural health units established in the province during the year.

In Europe fourteen officials representing seven countries were given opportunity to visit countries other than their own for the study of health organization. These representatives were from Austria, Bulgaria, Czechoslovakia, France, Hungary, Turkey, and Yugoslavia. In addition sixteen representatives from ten different countries visited the United States during the year as guests of the Board in order to study public health organization and methods in this country. Eleven of these representatives were from European countries, namely, Austria, Bulgaria, England, France, Norway, and Rumania; the others

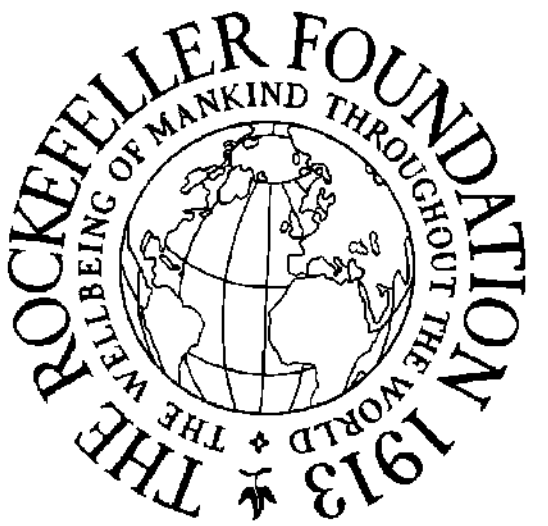

Fig. 54.—The D. Anna Nery School of Nursing, Rio de Janeiro, Brazil, in the development of which the Board is assisting.

Fig. 55.—Library of the D. Anna Nery School of Nursing.

came from Mexico, Porto Rico, Brazil, and Colombia.

Fellowships in Public Health

It is difficult to carry on a high type of public health work without adequate trained personnel. In order to aid governmental agencies in this fundamental feature of public health development, the Board has provided a limited number of fellowships in public health. These fellowships have not been granted to individuals but to governments. The official agencies have recommended their own fellows and have chosen the subjects in which they wish to have them trained. It is always understood that the government will hold a position open for the fellow while he is taking his training and the fellow in turn agrees to return to his country and carry out the work to which he has been assigned.

One hundred seventy fellowships were granted during 1926: thirty-one to the governments of Mexico, Central and South America, and the West Indies; eighty-nine to European nations; twenty-three to the East; and twenty-seven to various states in the United States and provinces in Canada. The distribution of fellows in the various specialties was as follows: public health administration 69, public health laboratory service 44, public health nursing 14,

malaria 11, sanitary engineering 10, vital statistics 8, child hygiene and infant welfare 5, tuberculosis 3, communicable disease control 2, epidemiology 1, school hygiene 1, industrial hygiene 1, mental hygiene 1.

In addition, eighty-three fellowships were awarded for study within the students' own countries. These resident fellowships were distributed as follows: Hungary 20, Italy 9, Poland 22, and Yugoslavia 32.

Public Health Nursing

The Board continued to aid the National Department of Health of **Brazil** during 1926 in the development of a nursing service. By presidential decree the government school of nursing in Rio de Janeiro was designated the "Doña Anna Nery School of Nursing" in honor of a famous Brazilian woman who nursed the sick and wounded in the military hospitals during the war with Paraguay. A new residence for nurses, provided by the Government and remodeled and equipped at the expense of the Board, was opened by the Director of the National Department of Health with appropriate ceremonies on July 29. The building, formerly the Hotel Sete de Setembro, is a beautiful one, situated on the shore of the bay and affording accommodations for ninety students. In order to provide enlarged teaching

facilities for the school, construction of a pavilion containing bacteriological and dietetic laboratories, and lecture, demonstration, lunch, and locker rooms was begun late in November in the grounds of the Hospital Gerál de Assistencia. This hospital provides training and experience in medical, surgical, and obstetrical nursing and in operating-room, eye, ear, nose and throat, and general out-patient service. Experience in public health nursing is obtained in the practise district of the Division of Public Health Nursing. As a result of the added opportunities for practical instruction the course of training was lengthened from two years and four months to two years and eight months.

Two new classes, of eighteen and ten students respectively, were admitted to the school in March and October. On December 10 the second class of nurses, numbering twenty-one students, was graduated. At the end of 1926 there were fifty-five students in the school, representing six different states and the Federal District. Three of the students had been sent for training by state governments with the understanding that they would return to the state from which they came upon completion of the course.

With graduate nurses available from the school of nursing, it has been possible for the National Department of Health to extend its

public health nursing service. During the year the official regulations for the service of nursing were revised to meet conditions which had arisen since its early organization. Made more complete and more effective, these regulations created a Division of Public Health Nursing under which the nursing service carried on by the various bureaus of the health department will function. At present this division directs the nursing work of four bureaus in the Federal District namely, child hygiene, tuberculosis, venereal diseases, and communicable diseases. In response to insistent requests of the doctors in charge, public health nurses have been assigned for duty during clinic hours in six of the ten child health stations which were operating under the Bureau of Child Hygiene at the close of 1926. Marked improvement in the service and in the attendance at the clinics was evident after the introduction of public health nurses. During a smallpox epidemic which continued throughout most of the year, the nurses were untiring and successful in their efforts to find and report the cases which occurred in their districts and to promote vaccination. By the close of 1926 all health visitors had been replaced by fully trained public health nurses. Some of these health visitors have entered the school of nursing to complete the required course of training.

In **France** the Board continued aid to the Central Bureau of Nurses, which is under the supervision of the National Office of Social Hygiene. The activities of the bureau during the year were directed principally toward the development of two important phases of its program, namely, the raising of the standards of the professional nursing service and the recruiting of candidates for the nursing service through active educational measures. The development of proper standards of nursing service has involved the organization and supervision of state examinations for professional nurses and the establishment of a central registry for nurses and a service of information concerning all phases of nursing education and nursing opportunity in France. The nursing schools officially recognized by the state have been visited, and close supervision of instruction has been given.

An active educational program has been carried out with a view to increasing the student enrolment of the various schools of nursing and particularly for the field of public health nursing. Through the efforts of the bureau, the Ministry of Labor has granted increased subsidies to the schools of nursing which prepare for the state diploma and also to public health agencies. This, it is hoped, will permit the raising of salary standards for trained workers.

IX

Cooperation with the League of Nations

The Board continued to cooperate with the Health Section of the League of Nations through contribution of funds toward international interchanges of public health personnel and the development of the service of epidemiological intelligence and public health statistics.

Five study tours were conducted during the year, one of which was limited to port medical officers and another to sanitary engineers. The Health Section also arranged a special interchange combining features of individual missions and general tours. Grants were also made for individual missions for eighteen health officials from ten countries.

The first general interchange of the year was held in England from February to April, primarily for medical officers of large urban centers, and was attended by fifteen health officers from fifteen countries. The second of the general interchanges, held in West Africa and extending from March to June, was attended by seventeen medical officers representing seven countries. The third interchange, which was composed of health officials especially interested in the organization and work of rural health services, included fourteen representatives from as many

countries and convened in Denmark from May to July. The fourth interchange, which represented the first ever arranged for sanitary engineers attached to health administrations, was held in Great Britain in June and July; eighteen engineers from eighteen countries participated. The fifth study tour was restricted to port medical officers of the Baltic and North Seas and included sixteen officers from thirteen governments who investigated conditions in these areas during September and October.

For the first time since the program of interchanges was organized, the Health Section arranged a type of interchange which would combine the advantages of individual and general study tours, the group to be limited strictly to ten general health officers from three or four neighboring countries. In the interchange arranged for July and August, 1926, ten officials from France, Belgium, and the Netherlands participated.

Epidemiological Intelligence and Public Health Statistics

The Board continued its assistance toward the work of the Epidemiological and Public Health Intelligence Service which included maintenance of a service of epidemiological intelligence and public health statistics, special training of government statisticians in improved

methods relating to the collection, analysis, and evaluation of demographic statistics, and the development of an Eastern Bureau in the city of Singapore.

The number of governments supplying regular epidemiological information increased from sixty-two in 1924 to 116 by the middle of 1926, so that now more than two-thirds of the world's population is covered by the service. A further significant development is the fact that the National Epidemic Prevention Bureau at Peking has begun to forward information to the service concerning the prevalence of epidemic diseases in China. Periodical publications of the work of the service include a weekly report which was instituted in 1926, a monthly epidemiological report, and an annual report on statistics and notifiable diseases. Under the auspices of the service the publication was continued of handbooks on demographic statistics of various countries, monographs relating to the organization and work of several national health services, and reports of special investigations of important epidemiological problems.

Eastern Bureau

To extend the work of the Epidemiological Intelligence Service to the Far East, a bureau was established at Singapore in 1925. This bureau,

which represents the only League of Nations institution in the Far East, serves a large area extending from Capetown and Alexandria on the west to Honolulu and Papeete on the east. The work of the Bureau has shown a consistent development during the past year; the number of ports furnishing current epidemiological information on prevalence of plague, cholera, smallpox, and other important epidemic diseases increased from sixty-six at the beginning of 1926 to 135 in the latter part of the year.

The Bureau has definitely established its practical value in port health administration and furthermore has rendered notable service to Eastern governments, particularly in serious cholera outbreaks which have occurred in the Far East during the past year. In view of the importance of the work of the Eastern Bureau, the Assembly of the League of Nations approved, at its seventh session in September, 1926, a decision to contribute toward the budget of the Bureau for 1927. The first session of the Advisory Council of the Bureau, which was convened in January, 1926, was attended by delegates from twelve Eastern governments.

Publications

During the year 1926 staff members and others directly associated with projects in which the

Board participated made the following contributions to public health literature, most of them in the form of articles published in medical journals that are widely circulated among persons interested in medical and public health topics:

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TABLE OF EXPENDITURES

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Grand Total	*$4,133,866.08*	*$1,658,572.61*	*$1,696,790.71*	*$1,868,479.00*
Relief and Control of Hookworm Disease	1,969,106.90	621,520.98	455,423.95	498,582.94
County Health Work	5,116.73	8,182.77	167,996.90	214,854.79
Malaria Control	155,929.92	133,929.02	150,291.34	161,455.14
Yellow Fever Control	192,372.79	139,757.40	236,755.46	211,980.51
Tuberculosis in France	1,087,662.45	518,013.51	359,540.31	268,274.49
Public Health Education	75,556.66	68,373.54	96,752.76	166,789.59
Public Health Nursing	.....	.....	.....	14,630.10
Public Health Administration	.....	12,708.81	20,736.31	54,287.63
Public Health Laboratory Service	.....	.....	16,109.70	26,325.29
Field Staff Salaries, Expenses, etc., Not Prorated to Specific Budgets	66,196.59	26,074.89	38,936.95	64,781.19
Miscellaneous	224,425.69	38,539.49	31,256.47	15,605.53
Administration	357,498.35	91,472.20	122,990.56	170,911.80
Relief and Control of Hookworm Disease	*1,969,106.90*	*621,520.98*	*455,423.95*	*498,582.94*
United States	388,721.59	136,019.06	15,730.39	7,510.26
West Indies	373,794.57	61,857.73	85,541.60	110,039.59
Central America	484,662.70	98,303.98	83,920.99	86,922.83
Mexico	.....	.....	.....	.....
South America	302,675.79	206,486.22	148,358.94	169,885.69
The East	396,839.93	113,472.55	115,805.46	116,718.54
Europe	.....	.....	.....	.....
Miscellaneous	22,412.32	5,381.44	6,066.57	7,506.03
United States †	*388,721.59*	*136,019.06*	*15,730.39*	*7,510.26*
Alabama	16,785.13	17,256.71	.....	.....
Arkansas	5,247.00	.....	.....	.....
Georgia	35,282.70	4,525.39	.....	.....
Kentucky	20,876.49	16,599.03	.....	.....
Louisiana	6,309.34	.....	.....	.....
Mississippi	54,930.00	20,709.72	.....	.....
North Carolina	44,557.97	10,463.00	.....	.....

* Includes initial deposit under retirement plan.

† In September, 1917, the hookworm work in the Southern States began to be absorbed in the programs states than in others, it was not possible to announce until the end of 1920 that in all the states the all efforts directed toward the relief and control of hookworm and other soil-borne diseases.

Years 1913–1926, Inclusive, Covering All Activities

1923	1924	1925	1926	Total
$2,482,903.46	*$2,699,801.86*	*$3,495,116.78*	*$3,260,524.87*	*$21,296,055.37*
415,138.41	460,679.93	412,312.07	346,735.48	5,179,500.66
230,829.08	241,667.39	234,110.36	241,933.11	1,344,691.13
163,400.50	195,120.63	203,808.19	235,502.51	1,399,437.25
334,603.80	639,063.50	539,838.38	589,254.13	2,883,625.97
82,041.52	67,093.60	11,647.61	.....	2,394,273.49
504,689.77	460,741.15	1,142,581.94	1,292,749.43	3,808,234.84
25,654.17	22,701.51	52,236.15	51,221.14	166,443.07
158,714.90	203,674.89	458,822.25	49,200.02	958,144.81
32,180.74	41,767.89	49,867.98	39,160.23	205,411.83
247,734.39*	121,101.32	157,662.13	183,319.68	905,807.14
11,065.32	10,171.07	9,905.54	10,319.98	351,289.09
276,850.86*	236,018.98	222,324.18	221,129.16	1,699,196.09
415,138.41	*460,679.93*	*412,312.07*	*346,735.48*	*5,179,500.66*
5,960.29	197.01	25.00	.....	554,163.60
116,828.44	132,230.12	99,274.42	48,369.96	1,027,936.43
90,714.46	81,304.80	54,147.75	36,652.93	1,016,630.44
.....	36,284.08	30,525.22	24,457.28	91,266.58
69,597.17	79,793.56	78,048.90	75,408.72	1,130,254.99
101,717.15	104,950.55	120,115.02	128,704.77	1,198,323.97
.....	4,012.42	14,260.57	1,500.88	19,773.87
30,320.90	21,907.39	15,915.19	31,640.94	141,150.78
5,960.29	*197.01*	*25.00*	.....	*554,163.60*
25.00	.....	25.00	.....	34,091.84
.....	.....	.....	.....	5,247.00
.....	197.01	.....	.....	40,005.10
.....	.....	.....	.....	37,475.52
.....	.....	.....	.....	6,309.34
.....	.....	.....	.....	75,639.72
.....	.....	.....	.....	55,020.97

of the rapidly developing county departments of health. The period of transition being longer in some county health departments would henceforth assume as one of their regular functions, responsibility for

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Relief and Control of Hookworm Disease—*Continued*				
United States—*Cont'd*				
South Carolina	$48,108.28	$17,210.63	$.....	$.....
Tennessee	41,116.10	13,533.22	.....	.....
Texas	55,060.44	14,723.99	.....	.....
Virginia	36,324.11	14,965.17	.....	.....
Administration	19,327.11	6,032.20	.....	.....
County dispensary work in the South	4,796.92	.....	.....	.....
Resurveys	.....	.....	15,730.39	7,510.26
West Indies	*373,794.57*	*61,857.73*	*85,541.60*	*110,039.59*
Antigua	19,593.84	.....	.....	2,552.67
Barbados (survey)	1,651.31	.....	.....	.....
British Guiana *	87,285.49	486.37	1,281.02	248.37
Cayman Islands (survey)	1,795.16	.....	.....	.....
Dominica (survey)	.....	.....	.....	.....
Dutch Guiana *	39,104.13	570.34	12,917.66	17,786.64
Grenada	37,364.32	.....	.....	.....
Haiti	.....	.....	.....	.....
Jamaica	13,770.33	18,400.09	16,949.24	23,241.56
Montserrat-Nevis (survey)	.....	.....	.....	.....
Porto Rico	.....	7,823.35	18,290.86	28,450.98
Santo Domingo (survey)	.....	1,077.07	.....	.....
St. Kitts (survey)	.....	.....	.....	.....
St. Lucia	40,213.46	11,444.57	8,545.88	9,378.80
St. Vincent	31,761.76	.....	.....	.....
Tobago (survey)	1,072.22	.....	.....	.....
Trinidad	70,801.05	16,016.71	17,489.50	17,590.83
Administration	29,381.50	6,039.23	10,067.44	10,789.74
Central America	*484,662.70*	*98,303.98*	*83,920.99*	*86,922.83*
British Honduras (survey)	4,273.47	.....	.....	.....
Costa Rica	106,764.21	20,219.60	14,061.92	6,355.05
Guatemala	76,230.23	17,126.43	15,362.58	18,467.99
Honduras	.....	.....	.....	10,802.41
Nicaragua	94,390.58	18,745.12	21,479.43	15,790.55
Panama	117,797.26	20,061.02	23,496.22	18,675.03
Salvador	66,744.99	14,973.80	3,520.84	8,283.79
Administration	18,461.96	7,178.01	6,000.00	8,548.01

* For administrative reasons British and Dutch Guiana, although on the mainland of South America,

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$.....	$.....	$.....	$.....	$65,318.91
.....	.....	.....	.....	54,649.32
.....	.....	.....	.....	69,784.43
.....	.....	.....	.....	51,289.28
.....	.....	.....	.....	25,359.31
.....	.....	.....	.....	4,796.92
5,935.29	.....	.....	.....	29,175.94
116,828.44	*132,230.12*	*99,274.42*	*48,369.96*	*1,027,936.43*
.....	.....	.....	.....	22,146.51
.....	.....	.....	.....	1,651.31
.....	.....	.....	.....	89,301.25
.....	.....	.....	.....	1,795.16
89.32	2,659.78	.....	.....	2,749.10
19,416.68	.....	.....	.....	89,795.45
.....	.....	.....	.....	37,364.32
.....	10,762.12	18,605.84	.....	29,367.96
21,280.54	27,742.83	36,056.49	26,141.60	183,582.68
.....	511.06	173.28	.....	684.34
30,395.06	36,417.62	33,311.12	11,114.76	165,803.75
.....	.....	.....	.....	1,077.07
1,989.24	2,624.67	.....	.....	4,613.91
9,182.04	11,625.68	.....	.....	90,390.43
.....	.....	.....	.....	31,761.76
.....	.....	.....	.....	1,072.22
23,460.87	29,200.94	.....	.....	174,559.90
11,014.69	10,685.42	11,127.69	11,113.60	100,219.31
90,714.46	*81,304.80*	*54,147.75*	*36,652.93*	*1,016,630.44*
.....	.....	.....	.....	4,273.47
4,979.63	4,877.16	9,875.42	759.03	167,892.02
16,246.60	16,532.26	15,820.13	6,796.56	182,582.78
14,286.73	12,902.91	.....	.....	37,992.05
12,980.46	12,017.01	.....	.....	175,403.15
29,407.59	26,938.47	22,398.17	21,128.74	279,902.50
5,271.68	.....	.....	.....	98,795.10
7,541.77	8,031.99	6,054.03	7,968.60	69,784.37

are listed with the West Indies.

Table of Expenditures of the International Health Board for the

ACTIVITY, STATE, AND COUNTRY	July 1, 1913–Dec. 31, 1919	1920	1921	1922
RELIEF AND CONTROL OF HOOKWORM DISEASE—*Continued*				
Mexico	$.....	$.....	$.....	$.....
South America	*302,675.79*	*206,486.22*	*148,358.94*	*169,885.69*
Brazil	300,550.31	193,560.95	129,723.97	148,189.38
Colombia	2,125.48	12,925.27	18,634.97	21,696.31
Paraguay	.....	.....	.....	.....
Europe	.....	.....	.....	.....
Spain	.....	.....	.....	.....
The East	*396,839.93*	*113,472.55*	*115,805.46*	*116,718.54*
Uncinariasis Commission to Orient	51,483.31	.....	.....	.....
Australia	38,611.29	35,417.41	39,912.29	35,375.57
British North Borneo	.....	3,106.23	7,440.10	5,641.00
British Solomon Islands (survey)	.....	.....	1,378.85	225.60
Ceylon	122,538.22	33,779.28	23,689.34	15,041.57
China	28,570.03	.....	.....	.....
Egypt	26,074.78	.....	.....	.....
Fiji Islands	14,743.13	.....	498.64	10,653.55
India	.....	7,810.00	12,496.30	9,883.53
Java (survey)	327.66	.....	.....	.....
Mauritius	.....	5,688.56	.....	7,356.43
Seychelles Islands	28,313.00	4,643.03	.....	.....
Siam	33,162.90	15,850.03	18,429.18	23,993.28
South Sea Islands	.....	.....	.....	.....
Straits Settlements	.....	.....	.....	.....
Administration	53,015.61	7,178.01	11,960.76	8,548.01
Miscellaneous	*22,412.32*	*5,381.44*	*6,066.57*	*7,506.03*
Field Studies:				
Alabama	.....	.....	.....	.....
Brazil	.....	.....	.....	1,006.35
Ceylon	.....	.....	.....	356.35
Research in life history of hookworm eggs and larvae	.....	.....	3,618.33	5,358.26
Thymol	15,476.21	.....	.....	.....
Research in carbon tetrachloride	.....	.....	.....	.....
Study of methods of diagnosing hookworm disease	43.95	.....	500.00	758.57
Conferences of health officers	5,064.16	2,488.71	.....	.....

* Reports incomplete.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$.....	$36,284.08	$30,525.22	$24,457.28	$91,266.58
69,597.17	79,793.56	78,048.90	75,408.72	1,130,254.99
45,827.49	47,338.46	24,134.26	.....	889,324.82
22,217.48	16,241.47	27,575.99	43,956.49	165,373.46
1,552.20	16,213.63	26,338.65	31,452.23	75,556.71
.....	4,012.42	14,260.57	1,500.88	19,773.87
.....	4,012.42	14,260.57	1,500.88	19,773.87
101,717.15	104,950.55	120,115.02	128,704.77	1,198,323.97
.....	.....	.....	.....	51,483.31
33,745.09	18,710.79*	.....	.....	201,772.44
3,101.75	.....	.....	.....	19,289.08
.....	.....	.....	.....	1,604.45
9,252.78	7,520.64	16,639.14	13,598.24	242,059.21
.....	.....	.....	.....	28,570.03
Cr. 8,952.64	.....	.....	.....	17,122.14
7,431.02	7,282.03	201.37	6,571.49	47,381.23
10,275.40	8,307.39	20,140.47	15,045.58	83,958.67
.....	22,752.97	21,446.09	19,333.97	63,860.69
12,235.10	3,987.01	Cr. 90.16	.....	29,176.94
.....	.....	487.82	229.38	33,673.23
27,086.88	25,844.05	26,671.78	45,845.88	216,883.98
.....	2,513.68	2,874.19	.....	5,387.87
.....	.....	19,980.01	20,111.64	40,091.65
7,541.77	8,031.99	11,764.31	7,968.59	116,009.05
30,320.90	21,907.39	15,915.19	31,640.94	141,150.78
14,524.06	4,869.46	4,784.17	6,009.62	30,187.31
220.96	.....	.....	.....	1,227.31
85.09	.....	.....	.....	441.44
7,434.94	10,634.98	9,231.02	21,234.26	57,511.79
.....	.....	.....	.....	15,476.21
9,455.85	5,852.36	1,900.00	4,288.57	21,496.78
.....	.....	.....	.....	1,302.52
.....	.....	.....	.....	7,552.87

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Relief and Control of Hookworm Disease—*Continued*				
Miscellaneous—*Cont'd*				
Motion picture film	$.....	$2,817.73	$1,584.74	$.....
Salvador:				
Portable house and office	1,421.54	75.00	.....	26.50
Loss from earthquake	406.46	.....	.....	.....
Dutch Guiana, care and storage of motor boat	.....	.....	363.00	.....
Study of hookworm in the pig	.....	.....	.....	.....
County Health Work	*5,116.73*	*8,182.77*	*167,996.90*	*214,854.79*
United States	*5,116.73*	*8,182.77*	*167,996.90*	*193,340.87*
Alabama	.....	.....	18,231.35	21,915.97
Arkansas	.....	.....	.....	.....
California	.....	.....	.....	607.22
Colorado	.....	.....	.....	.....
Florida	.....	.....	237.75	772.08
Georgia	.....	.....	4,338.17	2,790.68
Illinois	.....	.....	.....	1,927.94
Indiana	.....	.....	.....	1,641.66
Iowa	.....	.....	.....	954.18
Kansas	.....	4,494.00	6,316.99	13,095.38
Kentucky	.....	.....	16,316.41	16,057.84
Louisiana	.....	.....	5,618.28	15,397.64
Maryland	4,941.73	.....	1,815.36	7,168.18
Minnesota	.....	.....	.....	.....
Mississippi	.....	.....	15,652.72	11,713.47
Missouri	.....	.....	600.00	9,391.41
New Mexico	.....	.....	10,837.52	8,510.73
North Carolina	.....	957.04	14,413.38	7,169.78
Oklahoma	.....	.....	.....	.....
Oregon	.....	.....	.....	4,441.17
South Carolina	.....	.....	17,651.97	12,302.18
South Dakota	.....	.....	.....	.....
Tennessee	.....	.....	14,686.42	14,421.51
Texas	.....	.....	12,944.58	13,765.55
Utah	.....	.....	.....	.....
Virginia	.....	.....	13,972.74	11,319.44
Washington	.....	.....	.....	.....
West Virginia	175.00	2,731.73	4,164.56	5,089.15
Wyoming	.....	.....	.....	.....
Administration	.....	.....	10,198.70	12,887.71

* Reports incomplete.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$.....	$34.66	$.....	$108.49	$4,545.62
Cr.1,400.00	.....	.....	.....	123.04
.....	.....	.....	.....	406.46
.....	.....	.....	.....	363.00
.....	515.93	.....	.....	515.93
230,829.08	*241,667.39*	*234,110.36*	*241,933.11*	*1,344,691.13*
199,468.01	*187,481.35*	*179,128.43*	*167,527.25*	*1,108,242.31*
19,966.46	10,580.09	6,111.06*	8,276.84*	85,081.77
.....	.....	..... *	..... *	.....
6,250.00	7,187.49	7,500.00	5,249.98	26,794.69
.....	.....	1,875.00	2,500.00	4,375.00
.....	750.00	.....	.....	1,759.83
1,537.72	1,588.63	1,518.08	3,447.57	15,220.85
1,849.99	1,725.00	1,650.00	750.00	7,902.93
2,250.00	.....	.....	.....	3,891.66
181.33	2,361.76	1,625.90	3,600.00	8,723.17
7,349.13	6,648.29	2,908.36	3,747.28	44,559.43
16,802.48	15,631.73	11,321.01	11,710.60	87,840.07
14,184.73	10,984.34	6,009.57	5,499.61	57,694.17
3,720.00	.....	.....	.....	17,645.27
2,585.53	2,789.44	625.00	.....	5,999.97
20,238.91	12,252.91	11,081.99	8,256.25	79,196.25
9,575.00	7,350.00	5,155.00	7,322.13	39,393.54
6,879.86	11,240.19	6,516.00	5,691.68	49,675.98
9,041.86	10,836.22	8,981.33	5,604.96*	57,004.57
.....	3,283.96	10,782.94	12,995.48	27,062.38
6,138.42	8,116.42	10,307.79	9,396.77	38,400.57
13,929.78	13,489.00	12,848.94	10,191.39	80,413.26
.....	3,645.82	5,000.00	2,499.98*	11,145.80
10,950.54	11,507.59	9,126.74	12,555.63	73,248.43
11,386.40	8,636.57	10,514.57	8,793.02	66,040.69
.....	1,066.83	2,262.50*	..... *	3,329.33
11,710.39	8,687.40	9,456.96	7,943.43	63,090.36
.....	2,500.00	2,291.66	.....	4,791.66
8,223.28	8,606.13	9,719.05	9,819.24	48,528.14
399.75	2,462.51	2,498.63	922.54	6,283.43
14,316.45	18,918.77	21,440.35	20,752.87	98,514.85

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
County Health Work —*Continued*				
Canada	$.....	$.....	$.....	$9,000.00
Europe:				
Austria	.....	.....	.....	.....
France	.....	.....	.....	.....
Hungary	.....	.....	.....	.....
Poland	.....	.....	.....	.....
Porto Rico	.....	.....	.....	.....
South America:				
Brazil	.....	.....	.....	12,513.92
Philippine Islands	.....	.....	.....	.....
Training Stations:				
Alabama	.....	.....	.....	.....
Malaria Control	*155,929.92*	*133,929.02*	*150,291.34*	*161,455.14*
Cooperative Demonstrations	*155,637.87*	*121,652.24*	*112,807.97*	*94,015.02*
United States:				
Alabama	.....	8,906.92	7,650.06	15,416.93
Arkansas	33,635.49	7,048.90	4,777.15	6,388.11
California	.....	.....	.....	3,111.12
Florida	.....	.....	.....	.....
Georgia	.....	1,230.86	.....	2,017.08
Illinois	.....	.....	.....	422.80
Louisiana	.....	30,699.94	23,095.51	17,365.78
Mississippi	122,002.38	27,537.43	21,185.61	8,901.06
Missouri	.....	.....	1,471.37	2,900.00
North Carolina	.....	7,526.13	18,416.25	9,046.96
South Carolina	.....	13,942.74	13,321.90	10,892.31
Tennessee	.....	1,969.94	1,512.56	3,659.65
Texas	.....	11,472.34	10,347.23	2,307.84
Virginia	.....	5,284.84	831.65	6,062.08
Administration	.....	6,032.20	10,198.68	5,523.30
South America:				
Argentina	.....	.....	.....	.....
Brazil	.....	.....	.....	.....
Italy	.....	.....	.....	.....
Philippines	.....	.....	.....	.....
Porto Rico	.....	.....	.....	.....
Field Studies and Experiments	*292.05*	*10,466.43*	*37,238.37*	*67,440.12*
United States:				
Georgia	.....	.....	.....	.....
Louisiana	.....	.....	.....	.....
Maryland	.....	.....	.....	.....
Mississippi	.....	.....	.....	.....
North Carolina	.....	.....	.....	.....

* Reports incomplete.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$20,652.83	$24,347.17	$.....	$5,015.98*	$59,015.98
.....	.....	2,823.85	4,678.31	7,502.16
.....	.....	3,441.75	.....	3,441.75
.....	.....	.....	498.52	498.52
.....	.....	14,060.48	5,683.46	19,743.94
.....	.....	.....	5,157.80	5,157.80
10,708.24	19,313.07	29,240.11	53,371.79	125,147.13
.....	.....	5,415.74	.....	5,415.74
.....	5,160.06	.....	.....	5,160.06
163,400.50	*195,120.63*	*203,808.19*	*235,502.51*	*1,399,437.25*
79,280.50	*107,528.50*	*109,579.79*	*171,719.58*	*952,221.47*
8,232.07	5,936.26	5,239.56	6,306.38	57,688.18
4,274.13	4,263.40	1,954.16	.....	62,341.34
.....	.....	.....	.....	3,111.12
.....	1,125.00	.....	.....	1,125.00
3,756.74	5,298.38	3,634.40	2,841.52	18,778.98
1,006.84	827.68	3,214.92	.....	5,472.24
4,519.76	4,745.81	4,643.77	4,383.12	89,453.69
12,692.71	7,539.29	10,639.39	12,983.13	223,481.00
3,200.00	3,000.00	1,911.67	1,367.75	13,850.79
9,292.94	15,644.96	7,401.41	4,404.42*	71,733.07
7,556.95	7,196.81	9,035.86	9,700.00	71,646.57
1,963.50	5,516.22	4,541.63	5,978.95	25,142.45
5,213.64	5,007.00	1,151.09	.....	35,499.14
8,981.35	10,251.00	9,818.61	10,349.17	51,578.80
8,589.87	.....	5,907.04	11,410.22	47,661.31
.....	.....	7,944.75	25,630.99	33,575.74
.....	31,176.69	32,541.53	12,606.71	76,324.93
.....	.....	.....	51,852.70	51,852.70
.....	.....	.....	4,087.16*	4,087.16
.....	.....	.....	7,817.36	7,817.36
77,977.71	*80,530.36*	*84,410.69*	*57,045.26*	*415,400.99*
15,182.09	19,299.29	9,662.91	.....	44,144.29
205.17	.....	.....	.....	205.17
2,447.88	1,432.43	.....	.....	3,880.31
156.34	2,719.10	.....	.....	2,875.44
.....	.....	.....	17,637.92*	17,637.92

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913-Dec. 31, 1919	1920	1921	1922
Malaria Control—*Continued*				
Field Studies and Experiments—*Cont'd*				
Argentina	$.....	$.....	$5,661.02	$.....
Austria	.....	.....	.....	.....
Brazil	292.05	.....	.....	22,043.09
Ecuador	.....	4,595.59	.....	.....
Italy	.....	.....	.....	.....
Nicaragua	.....	425.66	6,662.51	8,091.00
Palestine	.....	.....	.....	7,250.11
Philippine Islands	.....	.....	.....	6,077.50
Porto Rico	.....	5,445.18	24,914.84	23,978.42
Spain	.....	.....	.....	.....
Venezuela	.....	.....	.....	.....
Training of Personnel				
France, Corsica	.....	.....	.....	.....
Miscellaneous	.....	*1,810.35*	*245.00*	.....
Conference of malaria workers	.....	1,810.35	245.00	.....
Motion picture film	.....	.....	.....	.....
Johns Hopkins School of Hygiene and Public Health	.....	.....	.....	.....
University of Chicago	.....	.....	.....	.....
Entomological studies in the field	.....	.....	.....	.....
Yellow Fever Control	*192,372.79*	*139,757.40*	*236,755.46*	*211,980.51*
Yellow Fever Commissions	93,862.03	83,717.13	.....	.....
Brazil	.....	.....	461.30	469.68
Colombia and Venezuela	.....	.....	.....	.....
Countries bordering on Caribbean Littoral and Amazon Valley	4,514.26	.....	.....	.....
Ecuador	77,870.75	28,574.98	1,698.06	3,017.05
Mexico and Central America	16,125.75	27,465.29	154,260.47	163,219.91
Peru	.....	.....	80,335.63	36,041.68
Training of Personnel	.....	.....	.....	3,000.00
Vaccine and Serum	.....	.....	.....	6,000.00
History of Yellow Fever	.....	.....	.....	232.19
West Africa	.....	.....	.....	.....
Administration	.....	.....	.....	.....

* Reports incomplete.
† Cost of work in Venezuela includes only the expenses of the survey commission.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$.....	$.....	$.....	$.....	$5,661.02
.....	2,102.00	2,381.99	.....	4,483.99
20,429.27	.....	.....	.....	42,764.41
.....	.....	.....	.....	4,595.59
127.24	15,243.89	36,504.93	.....	51,876.06
13,701.47	6,415.05	7,335.47	4,215.02	46,846.18
10,572.80	12,369.77	4,756.34	3,384.48	38,333.50
8,623.03	14,748.52	10,664.91	10,193.64*	50,307.60
6,532.42	6,200.31	13,104.14	.....	80,175.31
.....	.....	.....	12,521.67	12,521.67
.....	.....	.....	9,092.53	9,092.53
.....	.....	3,363.52	772.45	4,135.97
6,142.29	*7,061.77*	*6,454.19*	5,965.22	*27,678.82*
375.98	.....	.....	.....	2,431.33
5,766.31	4,756.46	.....	.....	10,522.77
.....	2,004.56	3,037.54	4,240.22	9,282.32
.....	.....	772.81	1,725.00	2,497.81
.....	300.75	2,643.84	.....	2,944.59
334,603.80	*639,063.50*	*539,838.38*	*589,254.13*	*2,883,625.97*
239.97	.....	.....	.....	177,819.13
99,838.09	515,421.42	370,391.59	442,185.19	1,428,767.27
37,259.99	62,252.23	9,723.35†	.....	109,235.57
6,332.05	4,123.33	.....	.....	14,969.64
.....	.....	.....	.....	111,160.84
155,549.64	40,922.22	46,979.27	10,305.04	614,827.59
.....	.....	.....	.....	116,377.31
8,875.04	5,000.00	9,256.76	4,147.93	30,279.73
3,786.06	6,000.00	6,000.00	5,867.94	27,654.00
6,481.45	5,344.30	3,941.33	2,250.00	18,249.27
.....	.....	93,546.08	124,498.03	218,044.11
16,241.51	.....	.....	.....	16,241.51

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Tuberculosis in France	*$1,087,662.45*	*$518,013.51*	*$359,540.31*	*$268,274.49*
Inauguration of Work	18,671.74	.....	.....	.....
Departmental Organization	.....	139,364.76	47,281.28	24,044.27
Public Health Visiting	.....	76,191.46	101,473.08	99,525.30
Educational Division	232,124.92	135,920.64	79,839.90	62,422.55
Medical Division	666,141.92	80,226.08	40,621.01	.....
Contingent Fund	.....	.....	750.00	2,490.94
Postgraduate Tuberculosis Courses	.....	.....	.....	5,044.15
National Committee	.....	.....	.....	.....
Central Administration	170,723.87	86,310.57	89,575.04	74,747.28
Public Health Education	*75,556.66*	*68,373.54*	*96,752.76*	*166,789.59*
Schools of Hygiene and Public Health	*56,551.00*	*29,929.01*	*24,929.87*	*46,752.71*
Brazil:				
Bahia	.....	.....	.....	.....
São Paulo	56,551.00	29,929.01	24,725.36	20,561.52
Czechoslovakia:				
Prague	.....	.....	204.51	3,416.41
England: London	.....	.....	.....	22,774.78
Poland: Warsaw	.....	.....	.....	.....
Hungary:				
Budapest	.....	.....	.....	.....
Yugoslavia: Zagreb	.....	.....	.....	.....
Canada: Toronto	.....	.....	.....	.....
Trinidad	.....	.....	.....	.....
United States:				
Harvard University	.....	.....	.....	.....
Fellowships	16,444.30	38,409.84	60,696.13	114,637.24
Study of Teaching Hygiene and Public Health in Medical School	.....	34.69	.....	.....
Teaching of Hygiene in Medical Schools:				
Harvard Medical School	.....	.....	.....	.....
Rio de Janeiro Faculty of Medicine	.....	.....	.....	.....
Training of Health Workers	2,561.36	.....	11,126.76	5,399.64
Training Bases:				
Alabama	.....	.....	.....	.....

* Reports incomplete.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$82,041.52	*$67,093.60*	*$11,647.61*	*$.....*	*$2,394,273.49*
.....	.....	.....	.....	18,671.74
.....	.....	.....	.....	210,690.31
54,759.09	37,371.65	.....	.....	369,320.58
.....	.....	.....	.....	510,308.01
.....	.....	.....	.....	786,989.01
4,766.70	4,420.94	.....	.....	12,428.58
.....	.....	.....	.....	5,044.15
22,515.73	10,472.28	11,647.61	.....	44,635.62
.....	14,828.73	.....	.....	436,185.49
504,689.77	*460,741.15*	*1,142,581.94*	*1,292,749.43*	*3,808,234.84*
411,592.58	*242,288.16*	*870,023.86*	*947,093.33*	*2,629,160.52*
.....	.....	3,595.40	.....	3,595.40
5,404.19	7,613.95	4,044.22	46,900.00	195,729.25
4,964.84	9,610.81	202,886.77	.....*	221,083.34
209,023.55	15,953.40	225,008.72	690,628.33*	1,163,388.78
92,200.00	209,100.00	3,000.00	4,680.00	308,980.00
.....	.....	40,000.00	.....	40,000.00
.....	.....	124,137.50	.....	124,137.50
.....	.....	262,500.00	162,500.00	425,000.00
.....	.....	4,851.25	4,885.00	9,736.25
.....	.....	.....	37,500.00	37,500.00
186,519.93	182,427.80	230,028.32	270,174.77	1,099,338.33
.....	.....	.....	.....	34.69
.....	.....	.....	5,500.00	5,500.00
.....	.....	.....	11,914.89	11,914.89
6,577.26	36,035.19	24,049.38	46,480.82	132,230.41
.....	.....	18,480.38	11,585.62	30,066.00

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Public Health Nursing	$.....	$.....	$.....	*$14,630.10*
Brazil	.....	.....	.....	14,630.10
France	.....	.....	.....	.....
Public Health Administration	.....	*12,708.81*	*20,736.31*	*54,287.63*
United States	.....	.....	.....	*1,686.33*
Developm't of State Health Services:				
Sanitary Engineering:				
Alabama	.....	.....	.....	.....
Colorado	.....	.....	.....	.....
Connecticut	.....	.....	.....	.....
Idaho	.....	.....	.....	.....
Iowa	.....	.....	.....	.....
Louisiana	.....	.....	.....	.....
Maine	.....	.....	.....	.....
Missouri	.....	.....	.....	1,050.00
Montana	.....	.....	.....	.....
North Dakota	.....	.....	.....	.....
Oregon	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....
Texas	.....	.....	.....	.....
Utah	.....	.....	.....	636.33
Vital Statistics:				
Alabama	.....	.....	.....	.....
Georgia	.....	.....	.....	.....
Iowa	.....	.....	.....	.....
Mississippi	.....	.....	.....	.....
Montana	.....	.....	.....	.....
Oklahoma	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....
West Virginia	.....	.....	.....	.....
Epidemiology:				
Alabama	.....	.....	.....	.....
Kansas	.....	.....	.....	.....
Mississippi	.....	.....	.....	.....
Rhode Island	.....	.....	.....	.....
South Carolina	.....	.....	.....	.....
South Dakota	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....
Utah	.....	.....	.....	.....
Virginia	.....	.....	.....	.....
Traveling Expenses of State Health Officers	.....	.....	.....	.....
Australia	.....	.....	.....	20,000.00
Canada	.....	.....	.....	.....

* Reports incomplete.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$25,654.17	*$22,701.51*	*$52,236.15*	*$51,221.14*	*$166,443.07*
25,654.17	22,701.51	26,497.42	51,221.14	140,704.34
.....	.....	25,738.73	.....	25,738.73
158,714.90	*203,674.89*	*458,822.25*	*49,200.02*	*958,144.81*
11,747.84	*12,315.92*	*18,940.01*	*23,600.63*	*68,290.73*
.....	.....	.....	$963.62	963.62
.....	1,200.00	800.00	.....	2,000.00
.....	.....	375.00	.....	375.00
.....	.....	1,600.00	1,578.67	3,178.67
3,495.12	.....	.....	58.33	3,553.45
457.72	.....	.....	.....	457.72
.....	.....	350.00	700.00	1,050.00
368.43	.....	.....	.....	1,418.43
927.57	1,855.01	950.00	.....	3,732.58
.....	477.73	.....	.....	477.73
.....	.....	.....	1,214.30	1,214.30
642.55	.....	.....	375.18	1,017.73
1,423.50	.....	.....	.....	1,423.50
345.00	500.00	150.00	.....	1,631.33
.....	.....	665.00	847.50	1,512.50
400.00	.....	.....	.....	400.00
.....	.....	.....	2,100.00	2,100.00
.....	.....	700.00	882.38	1,582.38
.....	.....	1,250.00	2,500.00	3,750.00
.....	.....	.....	686.68	686.68
.....	.....	1,273.09	1,500.00	2,773.09
.....	1,706.66	1,050.00	.....	2,756.66
.....	2,229.04	5,049.68	2,277.26*	9,555.98
.....	.....	236.62	406.72	643.34
.....	.....	.....	1,819.08	1,819.08
.....	.....	537.68	1,653.79	2,191.47
.....	.....	.....	193.75	193.75
.....	.....	.....	1,142.32	1,142.32
.....	.....	924.33	2,701.05	3,625.38
151.14	2,550.58	2,097.65*	.....*	4,799.37
3,536.81	750.00	930.96	.....*	5,217.77
.....	1,046.90	.....	.....	1,046.90
21,432.73	9,715.68	.....	.....	51,148.41
.....	577.93	.....	.....	577.93

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Public Health Administration—*Continued*				
Czechoslovakia	$.....	$12,708.81	$20,736.31	$5,534.47
Denmark	.....	.....	.....	.....
France	.....	.....	.....	.....
Honduras	.....	.....	.....	.....
Hungary	.....	.....	.....	.....
Jamaica	.....	.....	.....	.....
Philippine Islands	.....	.....	.....	12,046.83
Poland	.....	.....	.....	.....
Yugoslavia	.....	.....	.....	.....
League of Nations:				
Interchange of public health personnel	.....	.....	.....	15,020.00
Epidemiological intelligence service	.....	.....	.....	.....
Epidemiological Intelligence Bureau, Far East	.....	.....	.....	.....
Training in vital statistics	.....	.....	.....	.....
Expenses of Dr. W. H. Welch	.....	.....	.....	.....
Conference in Singapore	.....	.....	.....	.....
Public Health Laboratory Service	.....	.....	*16,109.70*	*26,325.29*
United States	.....	.....	*2,539.88*	*9,854.16*
Alabama	.....	.....	.....	3,261.03
Arkansas	.....	.....	.....	.....
Connecticut	.....	.....	.....	.....
Delaware	.....	.....	.....	.....
Kansas	.....	.....	2,539.88	5,468.14
Maine	.....	.....	.....	.....
Missouri	.....	.....	.....	874.99
Montana	.....	.....	.....	.....
Oregon	.....	.....	.....	.....
South Carolina	.....	.....	.....	.....
Tennessee	.....	.....	.....	250.00
Texas	.....	.....	.....	.....
Utah	.....	.....	.....	.....
Virginia	.....	.....	.....	.....
Central America	.....	.....	*1,377.02*	*4,096.00*
Costa Rica	.....	.....	.....	.....

* Reports incomplete.

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$7,720.00	$12,720.00	$7,720.00	$7,720.00	$74,859.59
.....	.....	198,833.61	1,581.19	200,414.80
.....	5,000.00	13,638.69	.....*	18,638.69
.....	.....	5,740.85	6,876.19	12,617.04
.....	.....	4,987.67	5,000.00	9,987.67
.....	.....	.....	330.77	330.77
18,873.44	11,944.76	5,811.89	.....	48,676.92
.....	.....	6,194.63	4,076.24*	10,270.87
.....	.....	33,950.00	.....	33,950.00
63,080.00	91,353.22	83,775.25	.....*	253,228.47
29,215.44	32,808.37	32,532.70	.....*	94,556.51
.....	.....	26,802.27	15.00*	26,817.27
6,645.45	20,700.54	19,894.68	.....*	47,240.67
.....	3,087.38	.....	.....	3,087.38
.....	3,451.09	.....	.....	3,451.09
32,180.74	*41,767.89*	*49,867.98*	*39,160.23*	*205,411.83*
19,708.21	*30,248.64*	*21,657.65*	*11,848.28*	*95,856.82*
9,973.47	12,560.85	7,479.00	3,880.53*	37,154.88
1,676.16	3,836.39	1,195.41*	.....	6,707.96
.....	375.00	1,800.00	.....	2,175.00
.....	1,500.00	.....	.....	1,500.00
2,693.88	.....	.....	.....	10,701.90
.....	.....	600.00	1,300.00	1,900.00
.....	2,067.41	1,771.48	2,049.17	6,763.05
676.74	2,100.00	1,050.00	.....	3,826.74
900.00	2,688.37	1,120.32	340.98	5,049.67
.....	.....	498.92	300.00	798.92
2,888.45	2,166.66	2,301.16	938.13	8,544.40
.....	.....	70.83	2,789.82	2,860.65
.....	1,900.00	2,775.00	.....*	4,675.00
899.51	1,053.96	995.53	249.65	3,198.65
12,472.53	*11,519.25*	*18,065.62*	*19,009.52*	*66,539.94*
303.14	2,994.39	3,636.12	2,755.92	9,689.57

Table of Expenditures of the International Health Board for the

Activity, State, and Country	July 1, 1913–Dec. 31, 1919	1920	1921	1922
Public Health Laboratory Service—*Cont'd*				
Central America—*Cont'd*				
Guatemala	$.....	$.....	$307.50	$621.75
Honduras	.....	.....	.....	.....
Nicaragua	.....	.....	85.18	2,445.53
Salvador	.....	.....	984.34	1,028.72
South America				
Colombia	.....	.....	.....	.....
Demonstrations	.....	.....	.....	206.33
Administration	.....	.....	12,192.80	12,168.80
Miscellaneous	*224,425.69*	*38,539.49*	*31,256.47*	*15,605.53*
Surveys and exhibits	90,572.65	24,996.05	13,437.76	.....
Library	1,844.12	.....	.....	.....
Philippine Hospital Ship	37,500.00	.....	.....	.....
Investigation of sewage disposal in rural homes	11,090.11	.....	.....	.....
Medical commission to Brazil	18,513.47	.....	.....	.....
Adviser in medical education	14,391.86	.....	.....	.....
Investigation of powdered milk	.....	500.00	.....	.....
Paris Conference on International Nomenclature of Causes of Death	.....	615.30	.....	.....
Compilation of mining sanitary code	.....	.....	125.98	77.20
Smallpox vaccine for Vera Cruz, Mexico	.....	.....	.....	.....
Plans for laboratory at Nictheroy, Brazil	.....	.....	.....	.....
Field equipment and supplies	29,642.50	5,996.96	4,982.25	5,189.62
Pamphlets, charts, and films	11,699.91	5,873.33	10,153.44	8,869.43
Hookworm and malaria films donated or lent	.....	.....	.....	.....
Express, freight, and exchange	2,671.07	557.85	2,557.04	1,469.28

Years 1913–1926, Inclusive, Covering All Activities—Cont'd

1923	1924	1925	1926	Total
$1,581.36	$1,715.94	$1,546.64	$3,637.25	$9,410.44
4,222.71	.....	.....	.....	4,222.71
3,271.69	6,808.92	12,882.86	12,616.35	38,110.53
3,093.63	.....	.....	.....	5,106.69
.....	.....	.....	410.50	410.50
.....	.....	.....	.....	206.33
.....	.....	10,144.71	7,891.93	42,398.24
11,065.32	*10,171.07*	*9,905.54*	10,319.98	*351,289.09*
.....	.....	.....	.....	129,006.46
.....	.....	.....	.....	1,844.12
.....	.....	.....	.....	37,500.00
.....	.....	.....	.....	11,090.11
.....	.....	.....	.....	18,513.47
.....	.....	.....	.....	14,391.86
.....	.....	.....	.....	500.00
.....	.....	.....	.....	615.30
.....	.....	.....	.....	203.18
165.62	.....	.....	.....	165.62
429.98	.....	.....	.....	429.98
6,688.08	6,949.08	6,689.78	5,302.81	71,441.08
3,057.48	2,389.95	2,884.85	6,192.48	51,120.87
.....	.....	40.00	99.12	139.12
724.16	832.04	290.91	Cr. 1,274.43	7,828.32

CHINA MEDICAL BOARD

Report of the Director

To the President of the Rockefeller Foundation:
Sir:

I have the honor to submit herewith my report as General Director of the China Medical Board for the period January 1, 1926, to December 31, 1926.

Respectfully yours,

ROGER S. GREENE

General Director

CHINA MEDICAL BOARD

OFFICERS AND MEMBERS

1926

Chairman

GEORGE E. VINCENT[1]

General Director

ROGER S. GREENE

Acting Resident Director in China

HENRY S. HOUGHTON

Adviser on Premedical Education and Assistant Resident Director in China[2]

N. GIST GEE

Assistant Resident Director in China

L. CARRINGTON GOODRICH

Secretary

NORMA S. THOMPSON

Executive Secretary

MARGERY K. EGGLESTON

Members

Wallace Buttrick[1, 3]
Simon Flexner
Raymond B. Fosdick[1]
Frederick L. Gates
Frank J. Goodnow
Vernon Kellogg[1]
Paul Monroe
John R. Mott
Francis W. Peabody
John D. Rockefeller, Jr.
Wickliffe Rose[1]
George E. Vincent[1]
William H. Welch

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[1] Member of Executive Committee.
[2] Assistant Resident Director in China as of June 1, 1926.
[3] Died May 27, 1926.

CHINA MEDICAL BOARD

OFFICERS AND MEMBERS

1927[1]

Chairman

GEORGE E. VINCENT[2]

General Director

ROGER S. GREENE

Acting Resident Director in China

HENRY S. HOUGHTON

Adviser on Premedical Education and Assistant Resident Director in China

N. GIST GEE

Secretary

NORMA S. THOMPSON

Executive Secretary

MARGERY K. EGGLESTON

Members

John G. Agar[2]
Simon Flexner
Raymond B. Fosdick[2]
Frederick L. Gates
Frank J. Goodnow
Vernon Kellogg[2]
Paul Monroe
John R. Mott
Francis W. Peabody
John D. Rockefeller, Jr.
Wickliffe Rose[2]
George E. Vincent[2]
William H. Welch

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[1] For the period ending March 30, 1927, after which the China Medical Board was merged with the Division of Medical Education of the Rockefeller Foundation.
[2] Member of Executive Committee.

CHINA MEDICAL BOARD[1]

I

In spite of civil wars and other disturbing events the work of the China Medical Board proceeded with no serious interruption through the year 1926. Special encouragement is to be derived from the steady development of Chinese leadership in all the fields in which the Board has been interested—in medical education and research, in the actual treatment and prevention of disease, and in the cultivation of the fundamental sciences of chemistry, physics, and biology. Both in the institutions which are controlled and supported by the Chinese people themselves and in those still conducted under foreign auspices there are now to be found many competent and experienced Chinese workers whose presence gives assurance that these enterprises are taking root in Chinese soil and will continue to grow even

[1] On account of the recent reorganization of the Rockefeller Foundation and the consequent transfer to other administrative auspices of the work carried on by the China Medical Board since 1914, future statements concerning the medical activities of the Foundation in China will appear in the report of the Division of Medical Education.

if circumstances should make necessary a sudden lessening of foreign participation.

II

Medical Education

Peking Union Medical College

The Peking Union Medical College, which is supported by the China Medical Board, graduated in 1926 its third class, consisting of seven Chinese and one American. At the same time five nurses were graduated, of whom three were Chinese, one a Siamese, and one a European. Most of these graduates remained in the service of the institution for further training in practical work and have successfully taken places formerly held by doctors and nurses brought from abroad.

Enrolment.—The tabulation on page 287 shows the enrolment for the academic year 1925–1926, compared with the enrolment in the fall term of the year 1926–1927. It will be seen that though there is no striking increase in the student body there is a definite growth which at a time of political excitement and financial depression is in itself ground for encouragement. The registration of graduate and special students includes many who come for short courses. The figure for 1925–1926 which includes all such students during twelve months is therefore not comparable with the figure for 1926–1927 which includes

Fig. 56.—Graduating classes of the Peking Union Medical College and the School of Nursing, 1926, with Dr. William S. Carter, acting director of the College, Roger S. Greene, general director of the China Medical Board, and Miss Ruth Ingram, dean of the School of Nursing.

only students registered from July 1 to the end of November, a period of five months, during the greater part of which both the hospital and the laboratories are less active than during the rest of the year.

STUDENT ENROLMENT

	1925–1926	*1926–1927*
Medical School		
First year	10	16
Second year	18	10
Third year	17	17
Fourth year	11	15
Fifth year (interns)	8	10
Total undergraduates	64	68
Graduate and special students	82	20
Total Medical School	146	88
School of Nursing		
Course I: Prenursing students for Course I (at Yenching University)	..	10*
First year	8	..
Second year	4	7
Third year	4	3
Fourth year	5	4
Course II: First year at Yenching University	3*	2*
Second year at Yenching University	..	3*
Total undergraduates	24	29
Graduate and special students	12	6
Total School of Nursing	36	35
GRAND TOTALS	182	123

If to the formally registered undergraduate and graduate students be added the resident staff of the hospital and the assistants in clinics

* The students in the first year of Course I and in the first and second years of Course II are now under instruction at Yenching University. Course I covers a period of three years and nine months, partly in Yenching University, partly in the Peking Union Medical College, and leads to a diploma in nursing. Course II covers a period of five years in the same institutions, and leads to a degree in science conferred by Yenching University in addition to a diploma in nursing. Hereafter those parts of the courses actually offered in the School of Nursing in the Peking Union Medical College Hospital will cover a period of no longer than three years.

Fig. 57.—Peking Union Medical College students, 1926, and some of the faculty members.

and laboratories, who are in a very real sense securing graduate training, the number of persons under instruction for the academic year 1925–1926 would reach a total of about 260.

Teaching Staff.—The following tabulation shows the development of the teaching staff and the increase in Chinese members of the faculty from 1921 to 1926:

	1921–1922			*1926–1927*		
	Chinese	*Foreign*	*Total*	*Chinese*	*Foreign*	*Total*
Medical School						
Professors	0	7	7	1	10	11
Associate professors	0	6	6	3	8	11
Assistant professors	0	0	0	..	5	5
Associates	4	12	16	14	10	24
Instructors	..	..	..	3	3	6
Assistants	5	5*	10	40	4	44
Totals	9	30	39	61	40	101
School of Nursing						
Instructors	0	2	2	1	4	5
GRAND TOTALS	9	32	41	62	44	106

A number of important appointments and changes in the staff should be noted. The Director, Dr. H. S. Houghton, being absent on furlough during the academic year 1925–1926, his place was taken by Dr. W. S. Carter, associate director of the Division of Medical Education of the Rockefeller Foundation. Dr. A. M. Dunlap, professor of otolaryngology, was appointed dean of the Medical School from July 1, 1926,

*Two serving part time.

retaining his duties as head of the department of otolaryngology.

Visiting Professors.—In the absence of the Professor of Surgery during the year 1925–1926, Dr. M. R. Reid, associate professor of surgery in the University of Cincinnati, served as visiting professor. Dr. E. D. Congdon, associate professor of anatomy, resigned in the spring term to accept an appointment as professor of anatomy in the Chulalongkorn University in Bangkok, Siam. Dr. J. Heng Liu, formerly associate professor of surgery, was appointed medical superintendent of the Hospital from July 1, 1926. Miss Ruth Ingram, M. A., R. N., formerly assistant superintendent of nurses, was appointed superintendent of nurses and dean of the School of Nursing from July 1, 1926. Dr. O. H. Robertson, professor and head of the department of medicine since February 7, 1923, resigned after a serious illness and was succeeded as of July 1, 1926, by Dr. F. R. Dieuaide, formerly assistant professor of medicine, who was appointed professor of medicine and acting head of the department.

In the fall term of 1926 Dr. D. L. Edsall, dean of the Harvard Medical School, served as visiting professor of medicine. Dr. H. L. Keim, assistant professor of dermatology in the University of Michigan Medical School, went out in

the summer of 1926 to serve for one year as associate professor of dermatology in the absence of the head of that division on furlough. Dr. C. A. Mills of the University of Cincinnati was appointed associate professor of medicine, arriving in Peking for the fall session of 1926.

Curriculum.—The curriculum has been the subject of much study in recent years and an attempt has been made at Peking to correlate the teaching of the preclinical sciences more closely with the teaching of medicine by means of courses conducted cooperatively by preclinical and clinical teachers. While this plan seemed to offer some distinct advantages to the student, further experience showed that such courses are difficult to administer satisfactorily and hamper the presentation of the fundamental medical sciences. Certain features of the new curriculum were therefore modified in the attempt to meet these difficulties.

Special investigations were pursued in nearly every department of the medical school. In Appendix I (page 319) is presented a list of papers published by members of the staff during the year 1926, from which the general nature of these studies will be seen.

In the department of anatomy special attention has been given to anthropological studies. Through the courtesy of the Chinese Geological

Survey, a Chinese government service which has won general recognition for its careful scientific work, a considerable quantity of prehistoric human material has been available for study. Toward the close of the year 1926 arrangements were made for cooperative investigation of fossil beds of the late Tertiary or early Quaternary period in which two teeth of man or a closely related anthropoid had been found by one of the workers associated with the Survey. A special appropriation of $13,000 was made by the China Medical Board to enable the department to take advantage of this unusual opportunity for significant investigation.

The department of physiology completed plans for the publication of a quarterly journal of physiology in which most of the physiologists, biochemists, and pharmacologists of China are cooperating. The first number has recently appeared containing reports of original work done by Chinese and foreign scientists in China in these related fields.

The department of pharmacology has been devoting special attention to the systematic study of Chinese drugs, some of which contain active principles justifying careful identification and analysis. A special chemical products laboratory is maintained by this department in which a few drugs are prepared in considerable

quantities from local materials for use in the laboratories and clinics.

The department of biochemistry, in addition to its other activities in teaching and research, has been engaged in the study of Chinese foods. Forty-four articles had been analyzed by the end of the year 1925–1926, and arrangements have been made for determining the biological values of staple foods by feeding experiments on small animals. Similar studies have also been conducted in the laboratories of the department of medicine.

The department of pathology has from the beginning been handicapped by the scarcity of autopsy material, owing to the natural popular prejudice against postmortem examinations. With the cooperation of the hospital administration and the clinical departments concerned, marked improvement has been effected in this respect. The total number of autopsies for the year ending June 30, 1926, was ninety-nine, including thirteen cases from outside the hospital and eleven still-born infants, as against a total of seventy-six for the preceding year and forty for the year 1921–1922, the first year in the new hospital. The percentage of cases dying in the hospital on which autopsies were performed was twenty-nine. The material thus provided was supplemented last year by specimens secured by

a member of the department from some two hundred autopsies which he was enabled to perform at Singapore through the courtesy of the local medical authorities.

Under the department of medicine the study of the problem of transmission of kala-azar was continued during the year. This disease is of considerable significance in certain parts of North China. The cost of the investigation is being met for the most part by a special appropriation from the China Medical Board.

Training in Public Health Work.—The department of hygiene and public health assisted the metropolitan police of Peking in organizing, in 1925, an experimental Health Station in a ward of the city containing a population of about fifty thousand, with the object of providing facilities for the training of medical students and nurses in practical health work. The first year of operation was completed in August, 1926. Good progress has been made in winning the confidence of the people with whom the station comes in contact, and the reports of births and deaths occurring in the district are now beginning to approximate the actual numbers. The reports of causes of death are still of little significance since only about 15 per cent of persons dying in the district are seen before death by a physician with modern training,

and it is but seldom that consent for autopsies can be obtained.

The division of sanitation has trained sanitary inspectors and has cooperated with the police in the control of fly breeding, protection of water from pollution, and other measures for the safeguarding of the public health. Bacteriological examination of the public water-supply and numerous wells has shown a general contamination of the water, but measures taken to correct this condition have not yet been effective.

Under the division of medical services, clinics are held in the Health Station, and public health nurses and doctors visit homes in the district, giving special attention to maternity and child welfare. Over a third of the 4,000 school children in the district have been examined for the correction of defects. A beginning is also being made in health work in certain factories in the city.

Besides furnishing opportunities for teaching undergraduate medical students and nurses, the Health Station enables graduates of schools of medicine or hygiene to learn by actual experience what kinds of public health work are most needed in China, what kinds are feasible under present conditions, and what methods are most likely to succeed. A member of the staff of the Peking Health Station was appointed last year

Fig. 58.—Staff of the Peking Health Station.

as health officer for the recently organized Chinese municipality of Shanghai and Woosung. About 40 per cent of the expense of the Station is met by various government bureaus, and the remainder by the College.

Relief Work.—Besides its regular activities the department of medicine was twice called upon for emergency service, first in the winter for the care of cases of infectious diseases among wounded soldiers, and later for similar work among a large number of refugees who had entered the city on account of disturbed conditions created by military operations in the surrounding country.

The department of surgery undertook the principal responsibility for the care of some 4,000 wounded soldiers in the military hospital at Nanyuan, a southern suburb of Peking, during the winter of 1925–1926. Some of the most serious cases were transferred to the College hospital, but for several weeks many members of the department, with older students and volunteers from other departments and other organizations in the city, attended the military hospital daily. During a period of three weeks 729 operations were recorded. All serious cases were given a fluoroscopic examination by means of a portable X-ray plant set up and operated by the roentgenologists of the

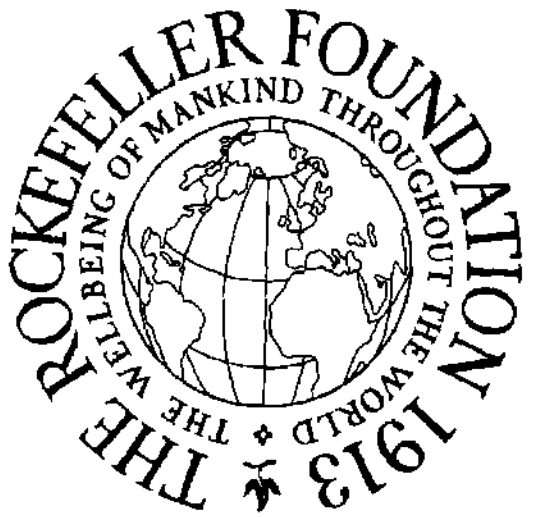

Fig. 59.—Group of pupils of a government primary school assembled at the Health Station, where they have been examined by fourth-year students of the Peking Union Medical College, under the direction of Dr. J. W. Hammond, associate in pediatrics.

College. The department of nursing similarly organized the nursing care of the wounded. When fighting was resumed in April, 1926, the department of surgery furnished for a short time two operating teams which cared for the wounded in a temporary hospital established by the Chinese Red Cross Society.

The Hospital.—The department of obstetrics and gynecology has had a particularly difficult task in building up its clientele. The care of men patients had been carried on continuously for many years in the old hospital of the Union Medical College before the reorganization of the institution and the erection of its new plant, but during the period of construction no wards were available for women. During the first year in the new hospital, which ended June 30, 1922, there were only ninety-seven deliveries in the hospital and four outside. In the year ended June 30, 1926, there were 267 deliveries in the hospital and thirty-three outside, a very gratifying development of the service. There were also thirty-six deliveries by physicians of the Health Station.

The hospital as a whole showed a distinct increase in activity: the total number of in-patients treated was 3,997 as compared with 3,826 in the preceding year, while out-patient visits increased from 88,329 in the year ending June 30, 1925, to 103,147 in the year ending

Photograph Excised Here

Fig. 60.

Photograph Excised Here

Fig. 61.

Two views of a room in the X-ray school of the Peking Union Medical College.

June 30, 1926. Of the latter number 18,997 were new cases, and the remainder represented return visits. In addition there were 10,297 office and out-calls in the College Health and Private Consultation Service.

Work was begun during the year on two new buildings, one a nurses' home, which will contain also quarters for women officers of the hospital and women medical students, the other a large building to the north of the original hospital group to contain additional space for the out-patient department, additional laboratories for the clinical departments and, on the third and fourth floors, quarters for male house officers and male nurses. A small isolation unit with beds for about twenty-five patients was authorized in 1926, which will cost approximately $50,000. These new buildings will necessitate some extension of the power plant and other mechanical services, provision for which has been made in the construction appropriations. A highly qualified Chinese engineer has lately been placed in charge of the mechanical equipment, filling a position formerly held by foreigners.

Budget.—A summarized statement of the receipts and expenditures of the College for the year 1925–1926 will be found in Appendix II (page 330). In spite of the interruption of traffic on the

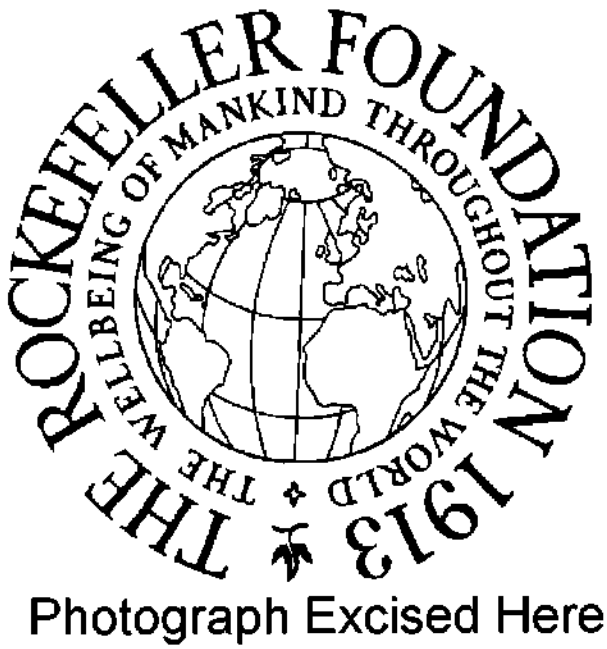

Fig. 62.—A medical ward of the Peking Union Medical College Hospital.

railways and the military operations in the vicinity, which greatly enhanced the cost of local supplies, such as coal, it was possible to complete the year with some saving under the budget. This result was due in part to the fact that the College was promptly reimbursed by the military authorities for its heavy expenditures in connection with the care of wounded soldiers during the winter.

The College publishes annually an announcement and a report on the hospital, from which further information about its activities may be obtained.

Hsiangya Medical College

The Hunan-Yale Medical School, conducted for eleven years by the College of Yale-in-China in cooperation with gentry of Hunan Province, has been reorganized under a purely Chinese board of trustees and renamed the Hsiangya Medical College. This school, with which the China Medical Board has cooperated since 1915, has produced a number of well-qualified graduates who have served acceptably not only in the Hsiangya Hospital at Changsha but also in the Peking Union Medical College and in some of the mission hospitals.

Application was made by the new trustees of the Hsiangya Medical College for continued assistance from the China Medical Board during the

Fig. 63.—Science Hall, Shantung Christian University.

next few years when it was clear that it would be impossible to secure adequate support from purely local sources. The application was endorsed by the Governor of the Province. In accordance with this request the Board pledged a contribution of Mex. $80,000 per annum toward a gross budget of Mex. $288,912 for the medical school and hospital, the remainder of the funds needed to supplement income from tuition and hospital fees being pledged by the Hunan Provincial Government, the China Foundation for the Promotion of Education and Culture, and the Yale Mission. Additional sums were provided by the China Foundation and from private sources for an enlargement of the medical school building and for a new out-patient building.

Later in the year political and labor troubles rendered the continuance of the enterprise difficult, and since then it has become necessary to close the school temporarily.

Shantung Christian University Medical School

The Board has been cooperating since 1916 with the medical school of the Shantung Christian University which conducts its teaching in Chinese, while the schools at Peking and Changsha have used English as a medium of instruction. Up to the end of 1926 the political disturbances

Fig. 64.—Science Hall, College of Yale-in-China, Changsha.

had not seriously affected this institution, and plans were in preparation for a new hospital building toward which the China Medical Board had previously appropriated $50,000 to supplement the sum of $115,000 raised by American women's missionary societies which are now helping to support the school as a coeducational institution.

III

Premedical Education

Aid to Universities and Colleges

The Board has been attempting for the past ten years to assist in the improvement of science teaching in the leading colleges of China by means of appropriations for additional teachers of physics, chemistry, and biology, for equipment and other departmental expenses, and in some cases for new laboratory buildings. In accordance with this policy annual contributions on a diminishing scale were pledged in 1926 to four institutions.

To Lingnan University, Canton, a total of $40,000 Hongkong currency was pledged over a period of five years.

To the National Southeastern University, Nanking, a government institution, a total of Mex. $18,000 was granted over a period of five

years. In 1926 Southeastern University completed a laboratory building for physics and chemistry at a cost of about Mex. $160,000, of which half had been contributed by the China Medical Board. A balance of Mex. $20,000, remaining from the Board's appropriation after this building was finished, was made available for a building for the departments of botany and zoology on condition that an equal amount should be provided by the University from other sources. It is especially gratifying that at a time of great financial difficulty for all government institutions the University should have been able to make such progress in the improvement of its laboratory facilities. This University has on its staff some of the most devoted scientific workers in China.

An appropriation of Mex. $14,000 was made toward the budget of the science departments of the College of Yale-in-China for the year 1926–1927, consideration of further aid being deferred until the future plans of the institution should become more definite.

Most of the students entering the Peking Union Medical College now come from Yenching University. This university has until recently used temporary quarters in the city of Peking, but in the fall of 1926 it occupied a group of fine new buildings outside the city near Tsinghua

College. Two spacious laboratory buildings have been provided for the sciences, one of them contributed by the China Medical Board and the other by friends of the women's college of the university. In order to complete the equipment of these buildings the Board authorized the transfer to Yenching University of equipment formerly purchased for the premedical school of the Peking Union Medical College, to the value of Mex. $23,622.

Institute for Science Teachers

The Board contributed Mex. $5,000 in 1926 toward the expenses of a summer institute for science teachers in secondary schools and colleges, which was attended by 100 teachers. The institute was held at Tsinghua College under the auspices of the National Association for the Advancement of Education. The China Foundation for the Promotion of Education and Culture also contributed to the budget of the institute.

It is planned to hold similar summer sessions annually in the future at two universities, one in North China and one in the Yangtze valley. The value of these institutes is now so well recognized that they will be organized and supported entirely by Chinese educational bodies without foreign assistance, except in so far as

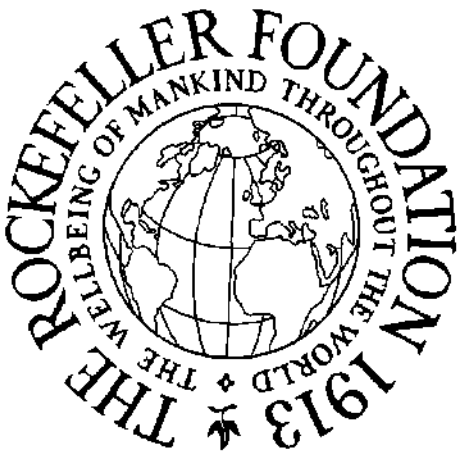

Fig. 65.—Group of wounded soldiers in the Yangchow Hospital.

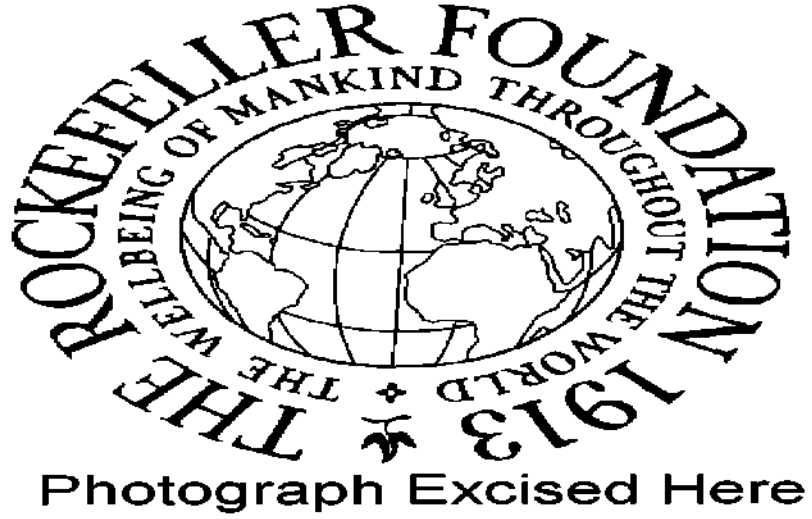

Fig. 66.—Entrance to the clinic building, Huchow Union Hospital.

foreign teachers may be invited to share in the instruction.

The China Foundation for the Promotion of Education and Culture

The establishment of the China Foundation for the Promotion of Education and Culture is likely to do much for the strengthening of science teaching and research in China. This foundation was organized in June, 1925, by the Chinese Government to receive and use for the furtherance of education and culture the remaining payments of the Boxer Indemnity due the United States, which were remitted to the Chinese Government by the United States Congress.

At its spring meeting in 1926 the China Foundation made grants to seven normal colleges for salaries of science teachers and for the purchase of additional equipment. Grants were also made to the scientific departments of seven other colleges or universities and to a few outstanding secondary schools. Subsidies were given to the National Geological Survey and the Science Society of China. The Metropolitan Library of Peking established by the China Foundation is devoting special attention to the building up of a good reference collection of scientific books and journals, which will be of

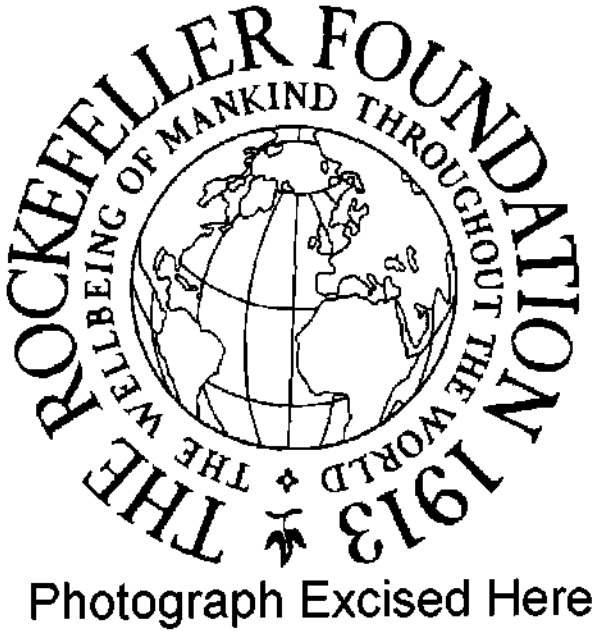

Fig. 67.—Wing of the main building, Soochow Hospital.

the greatest value to teachers and research workers in Chinese institutions hitherto inadequately supplied with scientific literature.

IV

Aid to Hospitals

In bringing to a close its program for the improvement of hospitals not connected with medical schools the Board made appropriations in 1926 to nine mission hospitals as follows:

To the Huchow Union Hospital of the Board of Missions of the Methodist Episcopal Church, South, and the Baptist Foreign Missionary Society, $7,500 toward maintenance during a five-year period, and $1,500 toward a total of $3,000 for X-ray equipment.

To the Fenchow Hospital of the American Board of Commissioners for Foreign Missions, $6,600 toward maintenance during a three-year period.

To the Nanking University Hospital, Mex. $45,000 toward maintenance during a five-year period.

To the Soochow Hospital of the Board of Missions of the Methodist Episcopal Church, South, Mex. $21,000 toward maintenance during a five-year period.

To the Yangchow Hospital of the Foreign Mission Board of the Southern Baptist Convention, Mex. $5,000 toward maintenance during a four-year period.

To the Tsangchow Hospital of the London Missionary Society, $2,000 for laboratory equipment.

To the Paotingfu Hospital of the Board of Foreign Missions of the Presbyterian Church in the United States of America, $13,687.50 toward maintenance for a period of five years and three months.

To the Chefoo and Changteh hospitals, both of the Board of Foreign Missions of the Presbyterian Church in the United States of America, $10,000 each toward maintenance during a five-year period.

There has been a marked improvement in hospital standards in China during the past twelve years. This has been accompanied in most instances by an increase in earnings and in

contributions from sources other than the China Medical Board. At the same time the improvement in medical and nursing education makes it possible to secure better qualified Chinese doctors and nurses for service in such hospitals, correspondingly reducing the expenditure necessary for foreign staff. In these circumstances the contributions recently made by the China Medical Board, being on a gradually diminishing basis, should enable most of these hospitals to readjust themselves to the new conditions without undue embarrassment.

V

Fellowships

Fellowships granted to doctors and nurses for graduate study have from the beginning formed an important part of the Board's program. These fellowships are of two types: those for study at the Peking Union Medical College, or some other approved institution in China, and those for study in Europe or America. A somewhat liberal policy has been followed in granting fellowships for study at Peking, which has been possible because of the greatly reduced expense for travel, maintenance, and tuition for those attending an institution in China, and these fellowships have been granted to approved workers in hospitals not connected with medical

schools, as well as to teachers of medical and premedical subjects, in order to counteract the unfortunate effects of too prolonged isolation of such workers in places where helpful professional associations are lacking. Many of these graduate and special students are able to remain for only a few months at a time, and some come to attend short courses lasting from three to six weeks. Others remain for a year or more of systematic work in a special field.

Fellowships for study abroad are now granted only to teachers in medical schools, schools of nursing, and science departments of colleges, or to persons preparing for such positions, and ordinarily only after full advantage has been taken of the opportunities provided for training at the Peking Union Medical College. Usually such fellowships are given after the applicant has demonstrated his ability and his interest in an academic career by three or four years of actual work in China. For the present, while foreign teachers are still being used in institutions in China, fellowships are granted to such persons as well as to Chinese.

The tables in Appendix III (page 334) show the subjects studied by holders of fellowships in China and abroad during the years 1924, 1925, and 1926. In 1926 the sum of $43,131.15 was spent for fellowships for study in the United States and

Fig. 68.—Fenchow Hospital: Men's wing (*left*), women's wing (*right*), clinic and administration building (*center*).

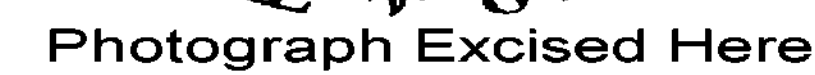

Fig. 69.—Women's ward, Fenchow Hospital.

Europe and the sum of $8,533.93 for fellowships at the Peking Union Medical College.

VI

China Medical Association

The China Medical Association is an international medical society, having Chinese as well as foreigners of many nationalities among its officers and members, and though its membership has in the past been largely foreign the Chinese members are gradually taking a more important place in it. The Association issues a monthly journal which is the best medical publication in China, and through its councils on medical education, on hospitals, and on publication and terminology, has made important contributions to medical progress in China. In 1926 the Board made an appropriation of Mex. $10,000 per annum for five years toward the general budget of the Association.

VII

Officers of the Board

Dr. Wallace Buttrick, a member of the China Medical Board and its first director, died on May 27, 1926. Dr. Buttrick made an invaluable contribution to the work of the Board through his wise guidance of its activities in its early years and by his helpful counsel as a member of

Fig. 70.—A laboratory of the Paotingfu Hospital.

Fig. 71.—An operating room, Changteh Hospital.

the Board from the time of its organization until his death.

Mr. L. Carrington Goodrich, assistant resident director in China, retired from the Board's service early in 1926, and was succeeded by Mr. N. Gist Gee, who had served previously as adviser on premedical education in the Peking office.

APPENDIX

I

Publications of Staff Members, Peking Union Medical College, 1926

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II

Peking Union Medical College
Peking, China

RECEIPTS AND EXPENDITURES FOR THE ACADEMIC YEAR ENDING JUNE 30, 1926

RECEIPTS

LOCAL INCOME		
General		
Rentals	Mex. $42,934.33	
Tuition, graduate students	3,448.83	
Tuition, students	5,570.00	
Tuition, pupil nurses	1,240.00	
Board and room, students	9,335.36	Mex. $62,528.52
Hospital		
First-class patients	Mex. $31,302.50	
Second-class patients	31,457.00	
Third-class patients	17,782.27	
Professional services	42,746.93	
X-ray fees	10,896.66	
Laboratory fees	1,205.00	
Outpatient fees	11,758.39	
Operating room fees	3,755.00	
Hire of ambulance	981.00	
Charges for use of radium	769.25	
Physiotherapy fees	433.48	153,087.48
Miscellaneous		
Sale of electricity	Mex. $2,279.77	
Sale of gas	1,410.77	
Sundry items	2,924.84	6,615.38
		Mex. $222,231.38
Less provision for uncollectable hospital fees		999.89
Total Local Income		Mex. $221,231.49
RECEIVED FROM CHINA MEDICAL BOARD		
Toward regular budget		1,555,284.56
Contingent fund		30,000.00
TOTAL RECEIPTS UNDER PEKING ADMINISTRATION		Mex. $1,806,516.05

EXPENDITURES

	SALARIES	OTHER EXPENSES	TOTAL
	Mex.	*Mex.*	*Mex.*
GENERAL OFFICE			
Administration	$111,650.54	$58,616.04	$170,266.58
Library	5,697.00	13,750.00	19,447.00
College Health Service	19,504.00	2,074.00	21,578.00
Reprints		8,216.00	8,216.00
Travel abroad		151,092.48	151,092.48
Travel in the Orient		10,287.37	10,287.37
Language study		2,589.83	2,589.83
Schools for foreign children		5,000.00	5,000.00
Totals	$136,851.54	$251,625.72	$388,477.26
PHYSICAL PLANT			
Mechanical department	$53,281.92	$162,409.01	$215,690.93
Buildings and grounds	36,504.70	14,925.65	51,430.35
Totals	$89,786.62	$177,334.66	$267,121.28
HOSPITAL			
Administration	$49,546.08	$12,110.16	$61,656.24
Resident staff	27,923.28		27,923.28
Medical and surgical supplies, drugs, etc.		49,796.51	49,796.51
Clinical laboratory	8,919.00	1,800.00	10,719.00
Nursing services	102,406.44		102,406.44
Physiotherapy	3,616.50		3,616.50
Dietary department	23,079.00	67,715.37	90,794.37
Nurses' home	5,640.89	8,850.29	14,491.18
Matron's department	6,334.41	17,590.98	23,925.39
Laundry	5,254.55	4,441.44	9,695.99
Pharmacy	11,664.00		11,664.00
Totals	$244,384.15	$162,304.75	$406,688.90
MEDICAL SCHOOL			
Administration	$10,356.00	$427.23	$10,783.23
Central photographic bureau	2,298.22	Cr. 3.17	2,295.05
Central illustration bureau	1,130.00		1,130.00

	Salaries	Other Expenses	Total
	Mex.	*Mex.*	*Mex.*
Medical School (*Continued*)			
Departments			
Anatomy	$43,936.96	$4,566.57	$48,503.53
Physiology	23,004.48	5,338.89	28,343.37
Pharmacology	18,487.24	3,973.60	22,460.84
Biochemistry	16,461.84	3,851.68	20,313.52
Pathology	80,118.84	13,350.00	93,468.84
Hygiene and public health	18,877.28	10,823.71	29,700.99
Medicine	116,825.75	10,961.63	127,787.38
Neurology	27,140.03	1,521.44	28,661.47
Surgery	75,359.16	2,222.10	77,581.26
Gynecology and obstetrics	$26,067.00	$950.00	$27,017.89
Otolaryngology	26,650.00	591.63	27,241.63
Ophthalmology	30,706.40	1,930.16	32,636.56
Roentgenology	21,249.00	4,460.00	25,709.00
Totals	$538,669.09	$64,965.47	$603,634.56
Premedical School Personnel	$47,316.92	.....	$47,316.92
School of Nursing	$18,001.00	$2,441.71	$20,442.71
Department of Religious and Social Work	$13,325.81	$1,707.00	$15,032.81
Student Halls	$3,754.41	$19,312.21	$23,066.62
Extraordinary expenses (new equipment, convalescent hostel, etc.)		$13,021.27	$13,021.27
Totals	$1,092,089.54	$692,712.79	$1,784,802.33
Less:			
Adjustment in Pharmacy Stock	*Mex.* $8,271.14		
Surplus Stock in Chemical Stores	15.14		$8,286.28
			$1,776,516.05
Contingent Items			30,000.00
Total Expenditures Under Peking Administration			$1,806,516.05

SUMMARY OF NET COST

YEAR ENDING JUNE 30, 1926

	Chinese Currency	*U. S. Currency*
Net expenditure under regular budget	$1,555,284.56	$824,665.78
Contingent Items	30,000.00	15,907.04
Expenses of trustees' office in the United States (purchasing agency, etc.)		55,929.54
TOTAL NET EXPENDITURES		$896,502.36

III

FELLOWSHIPS FOR STUDY IN THE UNITED STATES AND EUROPE

Subjects Studied	1924 To Chinese	1924 To Americans and Europeans	1924 Total	1925 To Chinese	1925 To Americans and Europeans	1925 Total	1926 To Chinese	1926 To Americans and Europeans	1926 Total
Medical									
Anatomy	..	2	2	1	3	4	1	2	3
Bacteriology, immunology, and serology	1	..	1	1	1	2	1	..	1
Biochemistry	1	2	3	1	1	2	1	1	2
Biophysics	..	..	..	..	..	..	..	1	1
Dermatology and syphilology	1	..	1	..	1	1	..	1	1
Gynecology and obstetrics	..	1	1	2	1	3	2	..	2
Medicine	1	5	6	..	4	4	1	4	5
Neurology and psychiatry	1	1	2	..	2	2	..	1	1
Ophthalmology	1	1	2	2	..	2	2	..	2
Oral surgery and dentistry	1	..	1	1	..	1	..	1	1
Otolaryngology	1	..	1	1	..	1	1	..	1
Pathology	..	..	..	..	1	1	1	..	1
Pediatrics	..	..	..	1	2	3	1	2	3
Pharmacology	2	1	3	1	1	2	..	1	1
Physiology	1	2	3	1	..	1	1	1	2
Roentgenology	..	1	1	1	1	2	1	1	2
Surgery	..	2	2	2	3	5	5	2	7
Totals	11	18	29	15	21	36	18	18	36

Subjects Studied	1924 To Chinese	1924 To Americans and Europeans	1924 Total	1925 To Chinese	1925 To Americans and Europeans	1925 Total	1926 To Chinese	1926 To Americans and Europeans	1926 Total
Premedical									
Biology	..	4	4	2	3	5	5	1	6
Chemistry	5	3	8	7	1	8	4	2	6
Mathematics	..	..	..	..	..	..	2	..	2
Physics	3	1	4	4	..	4	3	..	3
Totals	8	8	16	13	4	17	14	3	17
Miscellaneous									
Dietetics	1	..	1	..	..	..	..	..	..
Education	..	..	..	..	..	..	2	..	2
Hospital administration	2	1	3	..	2	2	..	1	1
Laboratory technique	..	1	1	..	1	1	..	..	..
Medical photography	1	..	1	..	..	..	..	..	..
Medical school administration	..	..	..	..	..	..	..	2	2
Nursing, general	6	5	11	5	4	9	1	2	3
Nursing, public health	..	..	..	..	..	..	1	..	1
Pharmacy	..	..	..	..	1	1	..	1	1
Student health control	..	..	..	..	..	..	..	2	2
Totals	10	7	17	5	8	13	4	8	12
Deductions for persons counted more than once	1	3	4	2	4	6	5	8	13
Grand Totals	28	30	58	31	29	60	31	21	52

FELLOWSHIPS FOR STUDY AT PEKING UNION MEDICAL COLLEGE*

Subjects Studied	1924 To Chinese	1924 To Americans and Europeans	1924 Total	1925 To Chinese	1925 To Americans and Europeans	1925 Total	1926 To Chinese	1926 To Americans and Europeans	1926 Total
Medical									
Anatomy	1	..	1	..	..	..	1	..	1
Bacteriology	2	..	2	2	..	2	4	1	5
Biochemistry	..	..	..	1	..	1	..	..	..
Dentistry	..	..	..	1	..	1	1	..	1
Dermatology	..	..	..	..	..	..	3	2	5
Embryology	1	..	1	1	..	1	..	..	..
Helminthology	..	..	..	..	..	..	1	..	1
Hygiene, dental	1	..	1	..	..	..	..	..	..
Medicine	11	4	15	10	..	10	3	1	4
Medicine (clinical laboratory technique)	2	..	2	..	..	..	..	..	..
Neurology	..	1	1	..	..	..	..	..	..
Obstetrics and gynecology	5	6	11	8	8	16	9	4	13
Ophthalmology	12	12	24	16	..	16	14	2	16
Otolaryngology	..	..	..	1	..	1	2	..	2
Parasitology	1	..	1	3	2	5	3	1	4
Pathology	3	1	4	7	..	7	5	..	5
Pediatrics	2	..	2	1	..	1	2	..	2
Pharmacology	1	..	1	1	..	1	2	..	2
Pharmacy	..	..	..	..	..	..	1	..	1
Physiology	..	..	..	1	..	1	2	..	2

Subjects Studied	1924 To Chinese	1924 To Americans and Europeans	1924 Total	1925 To Chinese	1925 To Americans and Europeans	1925 Total	1926 To Chinese	1926 To Americans and Europeans	1926 Total
Protozoology	..	..	..	..	..	..	..	1	1
Roentgenology	..	..	..	4	15	19	6	6	12
Surgery	5	5	10	6	2	8	3	1	4
Totals	47	29	76	63	27	90	62	19	81
Premedical									
Biology	1	..	1	1	..	1	..	..	..
Miscellaneous									
Anesthesia	..	1	1	..	..	..	..	..	..
Dietetics	..	1	1	..	..	..	1	..	1
Hospital administration	..	..	..	..	1	1	1	..	1
Nursing	14	2	16	22	..	22	9	..	9
Public health	..	..	..	..	..	..	1	..	1
Totals	14	4	18	22	1	23	12	..	12
Grand Totals	62	33	95	86	28	* 114	74	19	93
Deductions for persons counted more than once	2	1	3	24	2	26	13	2	15
Totals	60	32	92	62	26	88	61	17	78

* Undergraduate scholarships and fellowships given by other divisions of the Rockefeller Foundation are not included in this summary.

DIVISION OF MEDICAL EDUCATION

Report of the Director

To the President of the Rockefeller Foundation:
Sir:

I have the honor to submit herewith my report as Director of the Division of Medical Education for the period January 1, 1926, to December 31, 1926.

Respectfully yours,

RICHARD M. PEARCE
Director

DIVISION OF MEDICAL EDUCATION

Through its Division of Medical Education the Rockefeller Foundation keeps itself informed of current needs in the field of medical education and gives assistance to institutions of medical training whose work seems especially important to the advance of medicine throughout the world.

During 1926 representatives of the Division visited twenty countries for study of conditions in medical education or in connection with cooperative programs which were under consideration or already in progress. To further the international exchange of teaching methods and of information regarding new developments in medical education, study visits of teachers or administrators from four countries were financed, fellowships were granted to young medical scientists of thirty-two countries for graduate study in other countries; the Medical School of Chulalongkorn University, Bangkok, Siam, was assisted in securing six teachers for its staff; and two new volumes of the Division's series, "Methods and Problems of Medical Education," were published. Emergency aid, not contingent on a plan of development, was given to medical

schools in twenty countries of Europe handicapped by low exchange rates. This aid took the form of medical literature, laboratory supplies, or local fellowships. Assistance, without capital aid, looking toward the improvement of facilities for teaching and research, was given in nine medical schools of Italy and two medical schools of France. Assistance contingent on a plan of development and involving capital aid was given to twelve medical schools or other institutions of medical training in nine countries. Contributions were made to the New York Academy of Medicine toward the cost of its educational program, and to the American Medical Association to meet half the deficit of the Spanish edition of its Journal. A second payment was made to the Commission on Medical Education under the auspices of the Association of American Medical Colleges, in accordance with the Foundation's pledge of assistance over a five-year period. A summary of these several activities is given on pages 354 to 356.

Surveys and Visits by Staff Members

Preliminary studies of the status of medical education were carried out by the Division during the year in Bolivia, Haiti, India, and Peru. Visits in connection with projected or existing programs were made in Austria, China, Chosen

(Korea), England, France, Germany, Hongkong, Hungary, Italy, Japan, the Philippine Islands, Rumania, Scotland, Siam, the Straits Settlements, and Yugoslavia.

International Exchange of Information

Visits of Teachers and Administrators

The Division sometimes invites commissions or individual teachers or officials from medical schools to make study visits under its auspices in connection with undertakings in which it is especially interested. During 1926 a commission representing the Faculty of Medicine of the University of Lyon, France, was asked to come to the United States to observe methods of hospital and medical school construction and administration. The commission consisted of Professor Jean Lepine, dean of the Faculty, Professor A. Policard (histology), and M. Bellemain, architect of the university. They were given facilities for visiting medical schools and hospitals in the United States and Canada.

At the request of the Director of the Royal Serafim Hospital of Stockholm, Sweden, Mr. Gustaf Birch-Lindgren, architect of the Royal Board of Public Works of Sweden, was invited to make an extensive study of medical school and hospital construction in the United States and Canada. Dr. D. Murray Lyon, director of the

Medical Unit, University of Edinburgh, as a guest of the Division, made a special study of medical education in some of the Eastern and Middle Western states and in Canada.

Dr. Luiz de Rezende Puech, pediatrician and representative of the faculty of the medical school of São Paulo, Brazil, was invited to visit the United States to confer with the officers of the Foundation regarding the construction of the new medical school at São Paulo. He was subsequently given opportunity to study construction and equipment of schools and hospitals and to attend conferences on these subjects in the United States and Canada.

Fellowships

The Division grants fellowships to young medical scientists for study outside their own countries in preparation for teaching positions guaranteed to them in their home countries and to which they pledge themselves to return after the termination of their studies. In awarding the fellowships preference is given to candidates from institutions with which the Division is cooperating. During 1926 fellowships were held by students from the following countries: Argentina 2, Austria 4, Belgium 3, Brazil 5, Bulgaria 1, Canada 12, China 1, Czechoslovakia 1, Denmark 1, England 2, Estonia 2, France 2,

Germany 10, Hongkong 2, Hungary 5, Italy 2, Japan 6, Latvia 4, Lithuania 2, The Netherlands 1, New Zealand 1, Norway 1, Philippine Islands 3, Poland 6, Rumania 15, Siam 4, South Africa 1, Straits Settlements 1, Sweden 1, Syria 5, Turkey 3, Yugoslavia 4. The countries in which they studied were Austria, Belgium, Canada, Czechoslovakia, Denmark, England, France, Germany, Ireland, Italy, Scotland, Spain, Sweden, Switzerland, The Netherlands, and the United States. The distribution of the fellows according to subjects was as follows: pathology, bacteriology, and immunology 15, chemistry 12, physiology 13, clinical medicine and medical specialties 24, anatomy and related subjects (histology, embryology, cytology) 20, obstetrics and gynecology 2, surgery and surgical specialties 10, pharmacology 6, physics 2, protozoology 1, helminthology 1, hygiene 3, hospital administration 1, psychiatry 2, and biology 1.

To further the interchange of medical teachers and investigators between Great Britain and the United States, the Division cooperates with the British Medical Research Council, which is in a position to select promising British medical scientists for work in the United States. Fourteen fellows appointed by the Council studied the following subjects in this country during 1926: pathology 3, metabolism 2, pharmacology

1, psychiatry 2, chemistry 1, anatomy 1, biology 1, physiology 1, surgery 1, cardiology, pediatrics, and general medicine 1.

Fifty-five fellowships were in force during the year under the Medical Fellowship Board of the National Research Council, Washington, D. C., toward the expense of which over a five-year period the Division of Medical Education, in cooperation with the General Education Board, pledged assistance in 1922. The distribution of these fellowships according to specialties studied was: physiology 14, pathology 11, biochemistry 10, bacteriology 9, anatomy 4, pharmacology 4, dermatology 1, surgery 1, obstetrics 1.

Publications

During the year the Division issued the fourth and fifth series of a bulletin which it publishes from time to time under the title "Methods and Problems of Medical Education." The fourth series is devoted to a full description of the record room, unit history system, and follow-up system of the Presbyterian Hospital in the city of New York, with reproduction of the actual history of a patient. The fifth series includes descriptions of the departments of anatomy, neuroanatomy, histology, physiology, pathology, bacteriology, and public health at the Washington University School of Medicine, St. Louis; the departments

of anatomy, physiology, botany, zoology, biochemistry, and pharmacology at McGill University, Montreal; the departments of physiology at the University of Pennsylvania Medical School, Philadelphia, and at the Peking Union Medical College, China. There are also descriptions of the new building for the biological sciences at McGill University; the Outpatients' Department at the Royal Victoria Hospital, Montreal; the Mental Hygiene Service of the Department of the Seine, Paris; the laboratory and dispensary building of the Presbyterian Hospital, Philadelphia; a modern mission hospital at Soochow, China; a regional center for the control of cancer, Toulouse, France; the charting of clinical records at Mt. Sinai Hospital, New York; a surgical didactiscope used at Montpellier University, France; the Institute of Pathology at the University of Utrecht, Netherlands; and the students' unit medical laboratory at the University of Wisconsin in Madison.

Emergency Assistance in Europe

A program of emergency aid, now approaching its termination, has been carried out since 1920 in countries of Europe in which, on account of low exchange and other adverse post-war conditions, medical teaching and research have been severely handicapped. During 1926 scientific

literature was provided in twenty countries, namely: Armenia, Austria, Belgium, Bulgaria, Czechoslovakia, Estonia, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Portugal, Rumania, Russia, Switzerland, Turkey, and Yugoslavia. Laboratory supplies were furnished in ten countries, as follows: Austria, Bulgaria, Czechoslovakia, Estonia, France, Germany, Hungary, Poland, Rumania, and Yugoslavia.

Resident fellowships to the number of 125 were allotted to four countries as follows: France 4, Germany 79, Italy 38, Rumania 4.

Assistance in Improving Teaching and Research Facilities without Capital Aid

In some countries it has seemed advisable to aid a few important medical school departments which are headed by men with exceptional power to attract, and ability to train and encourage, the younger group interested in medical science, thereby insuring the proper development of the medical teachers and investigators of the future. Small grants, renewable if conditions justify, are made to these departments each year for a series of years, with the hope that governments or others responsible for financing medical education and research may eventually give increased support to the work. The funds allotted may

be used in any way to improve the teaching and research conditions in the departments in question, and for fellowships for local students who might otherwise seek careers outside the university.

Assistance was given during 1926 to twelve departments in nine medical schools in Italy and to three departments in two medical schools in France. These are listed below:

Italy

Institute of Normal Anatomy, Turin	Professor Giuseppe Levi
Institute of Anatomy, Florence	Professor Giulio Chiarugi
Institute of Physiology, Naples	Professor Filippo Bottazzi
Institute of Physiology, Turin	Professor Amedeo Herlitzka
Institute of Pathological Anatomy, Milan	Professor Alberto Pepere
Institute of Pathological Anatomy, Rome	Professor Antonio Dionisi
Institute of Pharmacology, Padua	Professor Luigi Sabbatani
Institute of Pharmacology, Genoa	Professor Alberico Benedicenti
Institute of General Pathology, Florence	Professor Alessandro Lustig
Institute of General Pathology, Turin	Professor Benedetto Morpurgo
Institute of General Pathology, Pavia	Professor Aldo Perroncito
Institute of Hygiene, Bologna	Professor Donato Ottolenghi

France

Department of Parasitology, Faculty of Medicine, University of Paris	Professor Emile Brumpt
Department of Histology, Faculty of Medicine, University of Lyon	Professor A. Policard
Department of Biology, Faculty of Medicine, University of Lyon	Professor L. Hugounenq

Capital Aid in Medical Development

New Undertakings

In 1926 a pledge was made to the German Institute for Psychiatric Research, Munich, toward the erection of a new building; a grant was made to St. Thomas's Hospital, London, toward the cost of a clinical laboratory for teaching medical students; an additional pledge was made to the Faculty of Medicine, São Paulo, Brazil, for buildings to house laboratories of anatomy, physiology, chemistry, and pathology; and additional appropriations were made to Chulalongkorn University, Bangkok, Siam, toward the development of the library and toward the cost of equipment for visiting professors.

Progress of Earlier Undertakings

Payments were made to the University of Cambridge, England, toward the building and endowment of a laboratory of pathology; to the University of Oxford for the endowment of a

laboratory of physiological chemistry; to the University of Edinburgh toward the development of clinical teaching in medicine and surgery; to the University of Brussels, toward the cost of a new medical school building; to Chulalongkorn University, toward the cost of a medical school building and toward salaries of professors, in accordance with the five-year cooperative agreement entered upon in 1923; to the American University of Beirut, Syria, toward the maintenance of the medical school during the third year of a five-year period of cooperation; to the University of Montreal, Canada, toward the support of the medical and premedical sciences; to the State University of Iowa, Iowa City, in conjunction with the General Education Board, toward a capital fund for building; to the Faculty of Medicine, São Paulo, Brazil, toward the development of the departments of pathology and bacteriology. Further instalments were paid to the University of Strasbourg for the development of the medical school in connection with the Foundation's pledge. A payment in capital was made to Columbia University toward the cost of medical school buildings.

Staff Changes

Dr. William S. Carter, associate director of the Division, completed his term of office as acting

resident director of the Peking Union Medical College for the academic year 1925–1926 in the absence of Dr. Henry S. Houghton, and proceeded on a survey of medical schools in the Orient.

Dr. Daniel P. O'Brien was appointed assistant director of the Division and was assigned to aid Associate Director Alan Gregg, who is in charge of the work in Europe.

Dr. Henry O. Eversole, who was in charge of the emergency program in Europe, resigned his post with the completion of that program, as of December 31, 1926.

Summary of Activities of the Division of Medical Education in 1926

1. Visits and Surveys

Austria	India
Bolivia	Italy
China	Japan
Chosen (Korea)	Peru
England	Philippine Islands
France	Rumania
Germany	Scotland
Haiti	Siam
Hongkong	Straits Settlements
Hungary	Yugoslavia

2. International Exchange of Information

a. Visits of teachers or administrators from

Brazil	Scotland
France	Sweden

b. Cooperation in securing 6 teachers for the Medical School of Chulalongkorn University, Bangkok, Siam

c. Support of foreign fellowships

Argentina 2	Japan 6
Austria 4	Latvia 4
Belgium 3	Lithuania 2
Brazil 5	Netherlands 1
Bulgaria 1	New Zealand 1
Canada 12	Norway 1
China 1	Philippine Islands 3
Czechoslovakia 1	Poland 6
Denmark 1	Rumania 15
England 2	Siam 4
Estonia 2	South Africa 1
France 2	Straits Settlements 1
Germany 10	Sweden 1
Hongkong 2	Syria 5
Hungary 5	Turkey 3
Italy 2	Yugoslavia 4

d. Support of 14 fellows appointed by the British Medical Research Council

e. Support of 55 fellows appointed by the Medical Fellowship Board of the National Research Council, Washington

f. Publications

"Methods and Problems of Medical Education" Series IV and V

3. Emergency Aid in Europe

a. Literature

Armenia	Finland
Austria	France
Belgium	Germany
Bulgaria	Hungary
Czechoslovakia	Italy
Estonia	Latvia

Lithuania	Russia
Poland	Switzerland
Portugal	Turkey
Rumania	Yugoslavia

b. Laboratory supplies

Austria	Germany
Bulgaria	Hungary
Czechoslovakia	Poland
Estonia	Rumania
France	Yugoslavia

c. Local fellowships

France 4	Italy 38
Germany 79	Rumania 4

4. Assistance in Improvement of Teaching and Research Facilities without Capital Aid

France Italy

5. Capital Aid in Medical Development

St. Thomas's Hospital Medical School, London
Faculty of Medicine, São Paulo, Brazil
Chulalongkorn University, Bangkok, Siam
University of Cambridge
University of Oxford
University of Edinburgh
University of Brussels
American University of Beirut
University of Montreal
State University of Iowa
Columbia University
University of Strasbourg

6. Miscellaneous Aid

Commission on Medical Education under the auspices of the Association of American Medical Colleges
Spanish Edition of the Journal of the American Medical Association
New York Academy of Medicine

DIVISION OF STUDIES

Report of the Director

To the President of the Rockefeller Foundation:
Sir:

I have the honor to submit herewith my report as Director of the Division of Studies for the period January 1, 1926, to December 31, 1926.

Respectfully yours,

EDWIN R. EMBREE

Director

DIVISION OF STUDIES

The chief feature of the work of the Division of Studies during the year 1926 was the development of a program of cooperation in the sciences of human biology. The regular work in nursing education was continued, and administrative responsibility was carried by the Division for certain other commitments of the Foundation, particularly in hospital and dispensary studies.

Human Biology

Surveys were continued in countries of the Pacific and in Europe of university work and other research in the biological sciences. In the early months of the year visits were made by the Director of the Division in company with Professor Edwin G. Conklin of Princeton University to the universities and biological stations of Japan. In the autumn similar visits were made in Great Britain by the Director and Professor C. Judson Herrick of the University of Chicago.

The following items in the general field of human biology were assisted either as new enterprises or in continuation of earlier activities: (1) anthropological studies, especially of the aboriginal tribes of Australia and neighboring

islands, under the general administration of the Australian National Research Council; (2) the Institute for Biological Research at the Johns Hopkins University; (3) anthropoid research at the Institute of Psychology of Yale University; (4) studies in brain physiology at the State University of Iowa; (5) the Marine Biological Station of Stanford University at Pacific Grove, California; (6) fellowships in the biological sciences under the administration of the National Research Council, and similar fellowships inaugurated some years earlier in physics, chemistry, and mathematics; (7) fellowships in the sciences of human biology administered directly by the Foundation on an international basis; (8) an international journal of abstracts of the biological sciences; (9) studies and demonstrations in mental hygiene at the Canadian universities of Toronto and McGill, under the auspices of the Canadian National Committee for Mental Hygiene, and certain other activities in this field under the auspices of the National Committee for Mental Hygiene of the United States. In the course of the year arrangements were completed for assisting at the Bernice P. Bishop Museum of Hawaii studies in Polynesian ethnology and anthropology, and at the University of Hawaii, biological research, especially that bearing on problems of human growth and inheritance.

Photograph Excised Here

Fig. 72.—Medical School of the Chulalongkorn University, Bangkok, Siam.

Photograph Excised Here

Fig. 73.—A class of the nurse training school of Siriraj Hospital, which is affiliated with the Chulalongkorn University Medical School.

Many of the appropriations for medical schools made by the Division of Medical Education have a direct bearing upon work in which the Division of Studies is interested. An increasing community of interest is evident between much of the work in human biology and that in the medical sciences.

Nursing Education

In nursing education cooperation was given chiefly in Europe and in America. Appropriations were made also to the School of Nursing affiliated with the Chulalongkorn University medical school and hospital, Bangkok, Siam, and, at the recommendation of the Department of Education of the Japanese Imperial Government, to the School of Nurses of St. Luke's International Hospital, Tokyo.

In Europe aid was given in 1926 to important government or university schools of nursing at the following centers: Paris and Lyon in France, Cracow in Poland, and Belgrade and Zagreb in Yugoslavia. Fellowships and assistance of less definite character were given to a number of schools in a dozen European countries.

In America direct appropriations were made to the important experiment represented in the School of Nursing of Yale University; to the center in Nashville, Tennessee, represented by

Photograph Excised Here

Fig. 74.—Schoolroom of the Iowa State Psychopathic Hospital, one of the teaching units of the State University of Iowa. The Foundation has made a grant of $60,000 to the latter institution toward the cost of special research in the physiology of the brain.

both Vanderbilt University and the George Peabody College for Teachers, and to the D. Ogden Mills Training School for Nurses, Saranac Lake, New York.

Fellowships

Fellowships form an important part of all branches of the work of the Division. The following is a list of sixty-two fellowships held under the Division during the year:

Sciences of Human Biology

Australia 2

AUBREY J. LEWIS, M.D.
WILLIAM L. WARNER

Canada 6

GEORGE W. ANDERSON, M.D.
CLARENCE HINCKS, M.D.
SAMUEL HOOKE, M.D.
JOSEPHINE KILBURN
WILLIAM B. MUMFORD
DAVID SLIGHT, M.D.

Japan 1

ARATA TERAO, M.D.

United States 4

LAURETTA BENDER, M.D.
STUART CARTER DODD, M.D.
ELIOT D. HUTCHINSON
KARL E. ZENER

Nursing Education

Belgium 1

M. DAMMAN

Czechoslovakia 1

E. A. FIALOVA

England 4

B. B. MCKAY
M. REYNOLDS
R. M. SIMMONDS
W. TANCRED

France 14

E. Bannette
J. Belmont
M. M. Carre
M. Dupont
L. H. Echalier
J. Garnier
A. E. L. Petin-Gebhart
F. Grammont
Perrine Imber
M. Lefebvre
A. M. Montelimard
M. Roob
G. M. M. Savornin
L. Walter

Hungary 6

M. de Vizi
M. Fiath
E. Filipan
K. Osztoics
M. Steller
M. Tarr

Poland 11

M. Babicka
H. Chrzanowska
M. Jedrzejewska
S. Komorska
T. Kulczynska
M. Ptaszynska
Z. Tuszowska
Z. Wasilewska
M. Wilkonska
Z. A. Zawadzka
M. Zmudska

Scotland 1

R. Pybus

Siam 1

N. S. C. Sinhanetra

United States 1

E. Russ

Yugoslavia 9

Z. Gavrilovic
H. Gladova
M. Gruber
J. Holobar
F. Janc
S. Papailiopulos
A. Schiffrer
L. Wagner
D. Zelenjak

The following fellowships supported by the Division of Studies but administered by other agencies are not included in the above lists:

Administered by National Research Council

Biology	46	Chemistry	30
Physics	32	Mathematics	13

Administered by National Committee for Mental Hygiene

Psychiatry	13	Psychiatric social work	3

THE ROCKEFELLER FOUNDATION

Report of the Treasurer

To the President of the Rockefeller Foundation:

Sir:

I have the honor to submit herewith my report of the financial operations of the Rockefeller Foundation and its subsidiary organizations for the period January 1, 1926, to December 31, 1926.

Respectfully yours,

L. G. MYERS
Treasurer

TREASURER'S OFFICE

The following table summarizes transactions relating to income, disbursements, and appropriations:

Income for the year	$9,075,022.38
Undisbursed income on hand January 1, 1926	6,735,366.11
Sundry refunds	7,767.88
Total amount available for disbursement	$15,818,156.37
Disbursements on account of appropriations	9,741,473.66
Balance of income undisbursed on December 31, 1926	$6,076,682.71
Unpaid appropriations and commitments effective in 1926 and prior years	4,200,284.01
Balance in income account available for appropriation	$1,876,398.70

Appropriations and pledges effective in 1927 and following years, amounting to $15,560,088, as shown in the annexed balance sheet, are not provided for in the foregoing figures but are considered as charges against the income of the years in which they fall due.

Income invested in land, buildings, and equipment, almost wholly in China, was increased by the net sum of $77,338.78, as shown in Exhibit L, on page 428, making a total to date of $9,039,493.40.

In accordance with resolutions of the Board of Trustees, dated November 6, 1926, the following actions were taken (Exhibit K):

The sum of $10,000 cash in the Laura S. Rockefeller Fund, representing Mrs. Rockefeller's gift of December 9, 1913, was returned to the executors of the estate of Laura S. Rockefeller.

The securities in the Laura S. Rockefeller Funds having a ledger valuation of $40,000, representing Mrs. Rockefeller's gifts of June 7, 1913, September 11, 1913, and November 29, 1913, were added to General Fund.

The securities in the John D. Rockefeller Fund having a ledger valuation of $37,000, representing Mr. Rockefeller's gifts of December 15, 1914, and February 11, 1915, were added to General Fund.

Since the close of the year the accounts of the Comptroller, the accounts of the Treasurer, and the securities owned by the Corporation have been examined by Messrs. Lybrand, Ross Brothers, and Montgomery, Accountants, who have rendered a report to the Chairman.

The financial condition and operations are set forth in the appended exhibits, listed below:

Respectfully submitted,

L. G. MYERS
Treasurer

EXHIBIT A

BALANCE SHEET—DECEMBER 31, 1926

ASSETS

I. Investments		
General Fund		
General schedule (Exhibit M)		$155,078,379.15
Cash on deposit		3,245.35
Secured demand loans		10,200,000.00
		$165,281,624.50
II. Land, Buildings, and Equipment Fund (Exhibit L)		
In China	$8,991,752.84	
In New York	47,740.56	
		$9,039,493.40
III. Income Accounts		
General Fund		
Secured demand loans	$1,050,000.00	
Cash on deposit in New York	78,463.10	
		$1,128,463.10
Cash on deposit in Brazil	$158,930.66	
Cash on deposit in Brussels	1,132,341.28	
Cash on deposit in Czechoslovakia	297,391.91	
Cash on deposit in Norway	100,626.54	
Cash on deposit in London	1,101,455.17	
Cash on deposit in Paris	9,407.30	
		2,800,152.86
Funds in hands of agents, to be accounted for, and sundry accounts receivable	$2,187,181.09	
Less accounts payable	39,114.34	
		2,148,066.75
Total		$6,076,682.71
Excess of appropriations and pledges over income available		13,683,689.30
		$19,760,372.01
Grand Total		$194,081,489.91

EXHIBIT A

BALANCE SHEET—DECEMBER 31, 1926

FUNDS AND OBLIGATIONS

I. FUNDS			
General Fund (Exhibit K)			$165,281,624.50
			$165,281,624.50
II. LAND, BUILDINGS, AND EQUIPMENT FUND			
Appropriations from income (Exhibit L)			$9,039,493.40
III. INCOME ACCOUNTS			
General Fund			
Balance due on appropriations payable in 1926 and prior years (Exhibit I)		$4,200,284.01	
Appropriations and pledges effective in 1927 and following years (Exhibit I):			
1927	$9,173,307.00		
1928	2,614,489.00		
1929	2,278,504.00		
1930	1,085,293.00		
1931	348,495.00		
1932	60,000.00		
		15,560,088.00	
			$19,760,372.01*
			$19,760,372.01
GRAND TOTAL			$194,081,489.91

* This total of all unpaid appropriations and pledges is $13,683,689.30 in excess of the balance of general fund income amounting to $6,076,682.71, as shown on opposite page, but it will be noted that these obligations become effective over a term of years, thus permitting their satisfaction gradually as the income of the respective years is received.

EXHIBIT B

STATEMENT OF RECEIPTS AND DISBURSEMENTS OF INCOME

GENERAL FUND

RECEIPTS

Balance, December 31, 1925		$6,735,366.11	
Refunds of payments made in prior years		7,767.88	
			$6,743,133.99
Income for the year		$9,074,814.05	
Balance of income in Laura S. Rockefeller Fund added to General Income		208.33	
			9,075,022.38
			$15,818,156.37

DISBURSEMENTS

INTERNATIONAL HEALTH BOARD (Exhibit G)			
General budget			
Hookworm, malaria, county health work, and yellow fever	$1,677,220.74		
State health services	23,035.08		
Public health laboratory service	24,726.22		
Public health administration	200,371.66		
Public health nursing	23,026.72		
Public health education	333,082.58		
Tuberculosis in France	6,724.70		
		$2,288,187.70	
Buildings, equipment, and endowment			
Schools of hygiene and public health	$1,483,322.06		
Government health institutions	54,193.61		
Schools of nursing	30,173.04		
		1,567,688.71	
Administration		228,570.06	
			$4,084,446.47

CHINA MEDICAL BOARD (Exhibit H)			
Medical education			
Peking Union Medical College			
Land, buildings, and equipment	$61,163.89		
Operation (Oct. 1, 1925, to Oct. 31, 1926)	994,089.63		
		$1,055,253.52	
Unaffiliated medical schools		31,033.55	
Premedical education		102,242.91	
Hospitals, mission and Chinese		146,761.56	
Fellowships and scholarships		53,154.74	
Miscellaneous		20,429.53	
Administration		64,396.79	
			$1,473,272.60
DIVISION OF MEDICAL EDUCATION (Exhibit C)			
General budget			
Aid to medical schools	$218,094.24		
Fellowships	282,729.76		
Miscellaneous	108,104.32		
		$608,928.32	
Buildings, equipment, and endowment			
Medical schools		2,597,562.39	
Administration		65,365.86	
			3,271,856.57
DIVISION OF STUDIES (Exhibit D)			
Human biology		$336,981.25	
Nursing education		148,020.50	
Hospital and dispensary service		74,804.08	
Fellowships in physics, chemistry, and mathematics		117,835.88	

EXHIBIT B—*Continued*

DIVISION OF STUDIES (Exhibit D) — *Continued*			
Miscellaneous	$30,439.34		
Administration	51,080.29		
		$759,161.34	
MISCELLANEOUS (Exhibit F)		6,445.13	
ADMINISTRATION (Exhibit F)		146,291.55	
			$9,741,473.66
Income on hand December 31, 1926, accounted for in balance sheet			$6,076,682.71

STATEMENT OF RECEIPTS AND DISBURSEMENTS OF INCOME

SPECIAL FUNDS

LAURA S. ROCKEFELLER FUNDS

Balance, December 31, 1925	$41.66
Income collected during the year ending December 31, 1926	3,000.00
	$3,041.66
Amounts paid to the several societies designated by Mrs. Rockefeller	2,833.33
Balance, December 31, 1926, added to General Income	$208.33

JOHN D. ROCKEFELLER FUND

Income collected during the year ending December 31, 1926	$1,850.00
Amount paid to the society designated by Mr. Rockefeller	1,850.00

ESTATE LAURA S. ROCKEFELLER FUND

Balance of income December 31, 1926	$64.77
Amount paid to Park Avenue Baptist Church Building Fund	64.77

1926 FOUNDATION APPROPRIATIONS
UNPAID BALANCES OF APPROPRIATIONS MADE IN PRIOR YEARS AND PAYMENTS THEREON MADE IN 1926

EXHIBIT C

DIVISION OF MEDICAL EDUCATION

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Belgium			
University of Brussels. Toward building and equipment of the new University institutes (D.M.E. 21029, 21030, 21076) *	$136,000.00	$785,000.00	$848,314.06
Brazil			
Faculty of Medicine, São Paulo			
Toward buildings for laboratories of anatomy, physiology, chemistry, and pathology (D.M.E. 21065)	.....	50,000.00	.....
Scientific equipment and assistants for Department of Pathology (D.M.E. 2959, 21050)	2,134.62	5,000.00	6,062.31
Toward salary and travel of professor of pathology (D.M.E. 2760, 2867, 2921)	1,743.83	.....	1,011.22
Canada			
University of Montreal, Faculty of Medicine. Development of laboratories (D.M.E. 2965, 21070)	25,000.00	25,000.00	25,000.00
Great Britain			
England			
University of Cambridge			
Toward building of School of Pathology (D.M.E. 2910)	256,500.00	.....	218,500.00
Toward endowment of School of Pathology (D.M.E. 2984)	.....	25,000.00	23,420.49
University of Oxford. Toward endowment of Department of Physiological Chemistry (D.M.E. 2828)	89,884.30	.....	87,400.00
St. Thomas's Hospital. Toward the cost of a clinical laboratory. £15,000 (D.M.E. 21045)	.....	73,200.00	72,900.00

* The figures in parentheses, following the text describing the purpose of each appropriation, are the serial numbers of the resolution of the Board or Executive Committee authorizing the payment.

EXHIBIT C—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Great Britain — *Continued*			
Scotland. University of Edinburgh			
Toward development of clinical teaching in its medical school (D.M.E. 2969, 21056)	$9,147.57	$8,000.00	$7,647.50
For equipment of the Department of Experimental Surgery and Surgical Research £5,000 (D.M.E. 2986)	.....	24,300.00	24,287.50
France			
University of Paris. Toward development of Department of Parasitology (D.M.E. 2942)	$4,000.00	$.....	$3,232.10
University of Strasbourg. Toward development of medical school (D.M.E. 2955)	55,950.00	.....	37,620.00
Italy			
Toward development of laboratory departments in medical schools of Italy (D.M.E. 2944)	8,000.00	.....	3,281.18
Siam			
Chulalongkorn University			
Medical School			
Buildings (D.M.E. 2819, 21149)	75,673.02	5,000.00	59,407.84
Toward salaries and traveling expenses of foreign professors (D.M.E. 2754, 2865, 21077)	10,345.69	26,000.00	23,442.74
Library aid (D.M.E. 21148)	.....	6,150.00	.....
Premedical School. Toward salaries and traveling expenses of foreign professors (D.M.E. 2866, 21078)	1,083.53	14,000.00	13,757.13
Travel of delegates to conference at Hongkong (D.M.E. 2935)	111.01	.....	.....
Scientific equipment, books, and supplies for use of professors in medical and premedical schools (D.M.E. 21054)	.....	5,000.00	52.92
Syria			
American University of Beriut. Maintenance and equipment (D.M.E. 2850, 2972, 21055)	35,200.00	25,000.00	43,000.00
United States			
Columbia University. Building and equipment of medical school laboratories (D.M.E. 21038)	1,000,000.00	.....	1,000,000.00

State University of Iowa. Toward development of its medical school (D.M.E. 21071)	.....	$225,000.00	$225,000.00
New York Academy of Medicine. For salaries and expenses of its educational program (D.M.E. 2881, 2985)	$12,712.22	53,400.00	45,916.34
Venezuela. Survey of medical education (D.M.E. 21069)	.....	250.00	.....
Fellowships			
Grants to doctors for medical study (D.M.E. 2979, 21034, 21053)	9,183.24	195,000.00	178,702.62
Resident fellowships in Europe (D.M.E. 2864, 2976)	61,158.20	36,000.00	17,499.42
Resident fellowships in Germany (D.M.E. 2863, 2975)	6,602.00	20,000.00	20,463.22
Medical Research Council, England. Fellowships in medicine in the United States (D.M.E. 2730, 21046)	31,819.86	45,000.00	21,988.82
National Research Council. Research fellowships in medicine supported jointly by the Foundation and General Education Board (D.M.E. 2869, 2980)	11,169.70	50,000.00	44,075.68
Miscellaneous			
American Medical Association. Toward loss in publishing a Spanish edition of its Journal (D.M.E. 2981-82)	.....	15,000.00	7,493.42
Association of American Medical Colleges			
Toward study of the medical curriculum in America (D.M.E. 21101)	.....	3,000.00	3,000.00
Laboratory equipment and supplies in Europe (D.M.E. 2725, 2862, 2974)	122,854.92	50,000.00	36,603.64
Constructive programs of aid to medical education in Europe (D.M.E. 2977)	.....	50,000.00	21,074.06
Medical literature in Europe (D.M.E. 2861, 2939, 2973, 21153)	13,408.07	34,000.00	34,641.94
Bulletins and reprints (D.M.E. 21079)	.....	11,500.00	11,473.21
Travel of visiting scientists (D.M.E. 2750, 2829, 2906-7, 2924-26, 2933, 2960, 2963, 2978)	27,472.43	15,000.00	11,272.82
Administration			
Home Office (D.M.E. 2895, 21016, 21083)	5,136.53	68,732.00	65,365.86
Field Staff (D.M.E. 2898, 21019)	8,165.44	39,500.00	28,948.53
TOTALS	$2,020,456.18	$1,982,032.00	

EXHIBIT C—*Continued*

		PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Unexpended balances of appropriations allowed to lapse				
D.M.E. 2981	$1,629.95			
D.M.E. 2982	5,876.63			
D.M.E. 21034	56.21			
D.M.E. 21045	300.00			
		.....	$7,862.79	.....
D.M.E. 2730	$10,620.22			
D.M.E. 2750	1,298.22			
D.M.E. 2754	1,501.13			
D.M.E. 2760	537.76			
D.M.E. 2828	2,484.30			
D.M.E. 2850	17,200.00			
D.M.E. 2861	2,393.74			
D.M.E. 2863	3,765.44			
D.M.E. 2864	55,498.70			
D.M.E. 2865	5,700.50			
D.M.E. 2867	4.42			
D.M.E. 2869	7,742.25			
D.M.E. 2881	9,487.34			
D.M.E. 2895	4,886.57			
D.M.E. 2898	7,027.03			
D.M.E. 2906	435.19			
D.M.E. 2907	196.39			
D.M.E. 2910	38,000.00			

D.M.E. 2921	190.43			
D.M.E. 2924	331.77			
D.M.E. 2934	5,090.21			
D.M.E. 2935	111.01			
D.M.E. 2936	1,500.00			
D.M.E. 2939	3,082.84			
D.M.E. 2942	767.90			
D.M.E. 2944	4,718.82			
D M.E. 2960	2,500.00			
D.M.E. 2963	916.63			
D.M.E. 2984	1,579.51			
D.M.E. 2986	12.50			
		$189,580.82	.....	.....
NET TOTALS		$1,830,875.36	$1,974,169.21	$3,271,856.57

EXHIBIT D

DIVISION OF STUDIES

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Human Biology			
Mental Hygiene			
National Committee for Mental Hygiene			
General Expenses (D.S. 2999)	$.....	$10,000.00	$10,000.00
Survey of care and treatment of mental deficiency (D.S. 2872, 2998)	4,147.01	20,000.00	17,101.57
Fellowships (D.S. 2874, 21000)	3,793.84	15,000.00	14,145.06
Canadian National Committee for Mental Hygiene. Studies in the application of mental hygiene to school children (D.S. 21001)	.....	15,000.00	15,000.00
National Research Council			
Research fellowships in the biological sciences (D.S. 2877, 21002)	24,243.51	75,000.00	64,473.24
Biological Abstracts. Organizing and editing (D.S. 2911, 21031)	2,019.85	45,000.00	40,540.68
State University of Iowa. Research in physiology of the brain (D.S. 2953)	45,000.00	.....	30,000.00
Johns Hopkins University. Biological research (D.S. 21003)	.....	33,000.00	33,000.00
Yale University. Promotion of anthropoid research (D.S. 21004)	.....	10,000.00	10,000.00
Fellowships (D.S. 21005)	.....	20,000.00	19,979.01
Australian National Research Council. Anthropological studies in Australian universities (D.S. 21147)	.....	14,450.00	13,318.08
Marine Biological Station at Pacific Grove. Toward building, equipment, and endowment (D.S. 21061)	.....	50,000.00	50,000.00
Equipment and supplies for projects in human biology (D.S. 21081)	.....	1,000.00	44.02
Travel of visiting scientists (D.S. 2823, 2954, 21060, 21063–64, 21072)	2,253.68	15,500.00	8,034.25
Surveys (D.S. 2949, 21002)	4,251.05	20,000.00	11,345.34
Nursing Education			
Europe			
St. Thomas's Hospital, London, School of Nursing. Erection and equipment of diet kitchen (D.S. 21154)	.....	10,000.00	.....

Travel of directors or teachers of school of nursing (D.S. 2847, 2909, 2928, 21073)	$4,550.00	$2,000.00	$2,104.53
Expenses of commission to England from the School of Nursing at Lyon, France (D.S. 2834)	594.30	.....	.....
Aid to nursing centers at Paris, Lyon, and Nancy (D.S. 2987)	.....	6,720.00	2,600.38
Maintenance of Training Center at Secretan Dispensary (D.S. 2988)	.....	13,500.00	5,346.15
Budapest School of Nursing. Alterations and equipment (D.S. 21008)	.....	10,000.00	.....
Debreczen School of Nursing, Hungary. Building and equipment (D.S. 21009)	.....	25,000.00	.....
University of Cracow, Poland, School of Public Health and Bedside Nursing. Salaries and scholarships (D.S. 2833, 2927)	76,577.08	.....	3,884.51
School of Public Health, Zagreb			
Building and equipment (D.S. 2832)	6,500.00	.....	6,457.04
Salary and scholarships (D.S. 2913)	2,650.00	2,000.00	3,634.46
Belgrade School of Nursing. Resident scholarships and development of teaching facilities (D.S. 2908)	4,581.25	.....	1,775.49
Japan			
St. Luke's International Hospital, Tokyo. For educational features of the School of Nursing (D.S. 21080)	.....	2,500.00	.....
Siam			
Nurses' Training School of Siriraj Hospital, (Chulalongkorn University). Travel and supplementary salaries (D.S. 21047)	.....	6,100.00	3,935.20
Scientific books and equipment (D.S. 21059)	.....	1,000.00	345.26
United States			
George Peabody College for Teachers. For education in public health nursing (D.S. 2991)	.....	8,000.00	8,000.00
D. Ogden Mills Training School for Nurses. Maintenance (D.S. 21058)	.....	5,000.00	5,000.00
Vanderbilt University. For educational features of the School of Nursing (D.S. 2929, 2990)	10,000.00	20,000.00	20,000.00
Nurse training courses (D.S. 21043)	.....	7,000.00	.....

EXHIBIT D—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Nursing Education—*Continued*			
United States (*Continued*)			
Yale University School of Nursing			
Equipment, supplies, and incidental expenses (D.S. 2721)	$16,324.78	$.....	$5,433.34
Maintenance of educational features (D.S. 2989)	.....	42,500.00	42,500.00
Survey of Negro Nursing Education in the United States (D.S. 2805)	434.97	.....	.....
Miscellaneous			
Fellowships (D.S. 21057)	.....	60,000.00	32,702.34
Report of the Committee for a Study of Nursing Education (D.S. 21032)	.....	1,400.00	1,360.00
Travel of visiting nurses (D.S. 2860, 2994, 21040)	264.58	7,000.00	2,941.80
National Research Council. Fellowships in physics, chemistry, and mathematics (D.S. 2876, 2997)	27,690.19	125,000.00	117,835.88
Hospital and Dispensary Service			
Committee on Dispensary Development. Toward expenses of Committee (D.S. 2870, 2996)	15,501.19	85,000.00	72,582.81
American Conference on Hospital Service (D.S. 2964, 21039)	1,880.01	7,000.00	1,880.01
Study of maternity care in England (D.S. 21033)	.....	700.00	341.26
Miscellaneous			
Concilium Bibliographicum. Current expenses (D.S. 21006)	.....	5,000.00	5,000.00
Administration			
Home Office (D.S. 2896)	699.88	52,084.00	51,080.29
Field Staff (D.S. 2899)	7,997.34	30,000.00	25,439.34
TOTALS	$261,954.51	$878,504.00	
Unexpended balances of appropriations allowed to lapse			
D.S. 21032 $40.00			
D.S. 21040 661.46			
D.S. 21063 154.24			
	$.....	$855.70	$.....

D.S. 2805	$434.97			
D.S. 2834	594.30			
D.S. 2847	344.31			
D.S. 2860	196.12			
D.S. 2870	8,278.82			
D.S. 2874	8.12			
D.S. 2877	18,438.10			
D.S. 2876	17,295.09			
D.S. 2896	683.12			
D.S. 2899	4,510.63			
D.S. 2909	2,365.27			
D.S. 2928	500.72			
D.S. 2929	10,000.00			
D.S. 2949	1,156.00			
D.S. 21060	87.40			
		64,892.97		
NET TOTALS		$197,061.54	$877,648.30	$759,161.34

EXHIBIT E

SCHOOLS OF HYGIENE AND PUBLIC HEALTH*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Harvard School of Public Health			
Toward cost of operation (R.F. 21013)	$.....	$12,500.00	$.....
TOTALS	$.....	$12,500.00	$.....

*For other appropriations and payments to schools of hygiene and public health see Exhibit G, Public Health Education, page 410.

EXHIBIT F
MISCELLANEOUS

		PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
Rotating funds for the Foundation's various offices (R.F. 2824)		$5,000.00	$.....	$.....
Fellowships. Contingent Fund. For sick care and special emergencies in connection with holders of direct fellowships (R.F. 2912, 21041)		662.95	2,000.00	1,851.29
War Relief Commission. Administration 1917 (R.F. 2216)		644.75	.....	.....
Asset accounts				
Furniture and fixtures (R.F. 21021)		.....	4,000.00	3,893.99
Books for the library (R.F. 21021)		.....	700.00	699.85
Part interest in building occupied by Paris Office (R.F. 21151)		.....	68,000.00	.....
TOTALS		$6,307.70	$74,700.00	$6,445.13
Administration				
Executive Offices (R.F. 2794-95, 2900, 2916, 2952, 21068)		$20,939.79	$102,782.00	$96,468.80
Treasurer's Office (R.F. 2894)		9,933.40	18,245.56	22,632.30
Paris Office (R.F. 2897)		41,932.05	64,680.00	27,190.45
TOTALS		$72,805.24	$185,707.56	
Unexpended balances of appropriations allowed to lapse				
R.F. 21068		.....	$10.67	.....
R.F. 2794	$4,524.20			
R.F. 2795	1,970.69			
R.F. 2893	3,876.44			
R.F. 2894	1,211.09			
R.F. 2897	31,619.79			
R.F. 2900	2,742.85			
R.F. 2952	201.82			
		46,146.88		
NET TOTALS		$26,658.36	$185,696.89	$146,291.55

EXHIBIT G

1926 INTERNATIONAL HEALTH BOARD APPROPRIATIONS *
UNPAID BALANCES OF APPROPRIATIONS MADE IN PRIOR YEARS AND PAYMENTS THEREON MADE IN 1926

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
HOOKWORM WORK			
United States. Alabama			
1925 (I.H. 22544)	$25.00	$.....	$.....
Mexico			
1925 (I.H. 22487-89)	7,715.82	.....	1,790.94
1926 (I.H. 22775-78)	.....	17,990.00	11,175.24
Central America			
Costa Rica			
1925 (I.H. 22364)	1,156.23	.....	510.73
1926 (I.H. 23066)	.....	750.00	.....
Guatemala			
1925 (I.H. 22365)	4,646.76	.....	983.90
1926 (I.H. 22779)	.....	6,783.75	4,067.57
Panama			
1925 (I.H. 22366, 22688)	7,191.39	.....	1,760.85
1926 (I.H. 22780)	.....	14,624.00	8,465.92

* The Foundation provides for the cost of work carried on by the International Health Board by making to the Board one or more appropriations to cover its work during the year. From these large grants the Board then makes its own appropriations for specific objects.

EXHIBIT G—(*Continued*)

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
HOOKWORM WORK—*Continued*			
South America			
Colombia			
1925 (I.H. 22546, 22680–82)	$8,720.10	$.....	$1,960.65
1926 (I.H. 22786–88)	.....	37,500.00	29,341.44
Paraguay			
1925 (I.H. 22376)	12,530.77	.....	4,754.04
1926 (I.H. 22789)	.....	19,400.00	14,956.78
West Indies			
Haiti (survey)			
1925 (I.H. 22367)	3,898.87	.....	671.41
Jamaica			
1925 (I.H. 22368–69)	11,347.18	.....	5,268.26
1926 (I.H. 22781–84)	.....	18,000.00	15,060.65
Montserrat, Nevis (survey)			
1925 (I.H. 22370)	1,026.72	.....	.....
Porto Rico			
1925 (I.H. 22371–73)	5,348.50	.....	2,786.79
1926 (I.H. 22785)	.....	10,920.00	4,891.18
Trinidad			
1924 (I.H. 21967–68)	2,326.52	.....	.....
The East			
Australia			
1924 (I.H. 22070)	2,269.74	.....	16.80
Ceylon			
1925 (I.H. 23021)	300.00	.....	257.72
1926 (I.H. 23026)	.....	562.50	206.87
Fiji			
1925 (I.H. 22335, 22377)	233.97	.....	19.65

India			
1925 (I.H. 22071-72, 22501)	$10,179.36	$.....	$.....
1926 (I.H. 22899-900)	.....	9,635.00	.....
Java			
1925 (I.H. 22502-3, 22632-34)	7,494.02	.....	200.82
1926 (I.H. 22901, 23062)	.....	14,500.00	6,419.00
Seychelles (survey)			
1925 (I.H. 22608)	12.18	.....	.....
1926 (I.H. 23106)	.....	300.00	212.78
Siam			
1925 (I.H. 22076, 22257-58, 22379-80, 22734)	27,933.00	.....	11,474.41
1926 (I.H. 22902, 23046, 23067-68)	.....	16,860.00	12,897.73
South Sea Islands			
1925 (I.H. 22381)	1,000.00	.....	.....
Straits Settlements			
1925 (I.H. 22505, 22755-56, 23020)	2,178.53	.....	Cr. 945.09
1926 (I.H. 22790)	.....	12,800.00	9,931.85
Europe. Spain			
1925 (I.H. 22609, 22645)	3,128.12	.....	496.33
1926 (I.H. 23024, 23081)	.....	2,105.00	540.24
Field Studies			
Alabama			
1925 (I.H. 22382)	2,074.69	.....	858.86
1926 (I.H. 22947)	.....	6,000.00	2,009.62
China			
1925 (I.H. 22383)	48.04	.....	.....
Studies by Dr. W. W. Cort			
1925 (I.H. 22668)	3,805.27	.....	2,303.77
1926 (I.H. 22898)	.....	18,932.00	15,289.68
Vanderbilt University. Research in carbon tetrachloride (I.H. 23025)	.....	8,280.00	2,079.57
Miscellaneous. Motion picture film on hookworm disease (I.H. 22493)	965.34	.....	108.49

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
COUNTY HEALTH WORK			
United States			
Alabama			
1925 (I.H. 22516)	$1,975.26	$.....	$1,436.32
1926 (I.H. 22969)	.....	9,050.00	5,861.09
Arkansas			
1925 (I.H. 22613-14, 22736, 22742)	1,150.00	.....	.....
1926 (I.H. 22806-7, 23028, 23111-12)	.....	2,400.00	.....
California			
1925 (I.H. 22570-72)	1,875.00	.....	1,875.00
1926 (I.H. 22970-1, 23092-3, 23150)	.....	5,249.98	2,500.00
Colorado			
1925 (I.H. 22647)	729.14	.....	625.00
1926 (I.H. 22808)	.....	2,500.00	1,875.00
Georgia			
1925 (I.H. 22573, 22699)	572.08	.....	410.16
1926 (I.H. 22879)	.....	4,000.00	1,616.37
Illinois			
1926 (I.H. 22828)	.....	750.00	750.00
Iowa			
1925 (I.H. 22574)	1,501.50	.....	627.40
1926 (I.H. 22972)	.....	3,800.00	2,854.51
Kansas			
1925 (I.H. 22575-78, 22700-3, 22743)	2,849.26	.....	549.29
1926 (I.H. 22827, 22917, 23029, 23082, 23113-14)	.....	3,800.01	2,785.85

Kentucky			
1925 (I.H. 22401-7)	$3,969.72	$.....	$3,140.73
1926 (I.H. 22880-86, 23151)	.....	12,512.50	8,465.80
Louisiana			
1925 (I.H. 22408-14)	2,604.02	.....	1,835.81
1926 (I.H. 22918-21)	.....	7,375.00	4,129.34
Mississippi			
1925 (I.H. 22518-22, 22615, 22662, 22684, 22923)	4,655.50	.....	2,563.49
1926 (I.H. 22973-77, 23083, 23152)	.....	12,766.66	5,630.58
Missouri			
1925 (I.H. 22579-83, 22663, 22704-6, 22577)	1,745.00	.....	1,500.00
1926 (I.H. 22809-13, 23030, 23115, 23153)	.....	8,250.00	5,358.40
New Mexico.			
1925 (I.H. 22617-24, 22707-8, 22710-13, 22715)	5,424.74	.....	2,840.74
1926 (I.H. 22821-26, 23116-21)	.....	5,850.00	4,226.39
North Carolina			
1925 (I.H. 22584)	3,668.04	.....	3,649.37
1926 (I.H. 22978)	.....	7,500.00	5,604.96
Oklahoma			
1925 (I.H. 22526-30, 22716-20, 22758-60)	3,666.94	.....	2,799.90
1926 (I.H. 22979-85, 23122-28, 23154)	.....	14,141.67	10,095.54
Oregon			
1925 (I.H. 22416-21)	3,392.21	.....	2,250.00
1926 (I.H. 22814-19)	.....	10,812.00	6,999.96
South Carolina			
1925 (I.H. 22422-31)	3,320.99	.....	2,890.99
1926 (I.H. 22887-92, 23155)	.....	12,391.85	7,280.41
South Dakota			
1925 (I.H. 22585-86)	2,500.00	.....	2,500.00
1926 (I.H. 22820, 22986)	.....	4,000.00	1,999.98

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
COUNTY HEALTH WORK—*Continued*			
United States—*Continued*			
Tennessee			
1925 (I.H. 22432-40, 22625, 22721-25)	$5,116.31	$.....	$1,863.05
1926 (I.H. 22922-31, 23038, 23129, 23156)	.....	12,555.00	8,314.66
Texas			
1925 (I.H. 22531, 22587, 22626, 22648-49, 22664-65, 22669, 22744-47)	3,785.87	.....	2,367.42
1926 (I.H. 22832, 22987-89, 23130-31, 23157-60, 23175, 23181)	.....	7,299.92	4,968.99
Utah			
1925 (I.H. 22441-42)	1,662.50	.....	1,325.00
1926 (I.H. 22990-92, 23136, 23161, 23169)	.....	4,600.00	.....
Virginia			
1925 (I.H. 22532, 22588-90)	2,899.16	.....	2,356.12
1926 (I.H. 22993-96)	.....	8,500.00	6,183.54
Washington			
1925 (I.H. 22533)	625.01	.....	416.67
West Virginia			
1925 (I.H. 22591-98, 22726-27)	7,012.03	.....	2,996.08
1926 (I.H. 22997-23002, 23132, 23162, 23383-84)	.....	13,979.05	6,462.60
Wyoming			
1925 (I.H. 22599)	1,849.44	.....	1,848.07
1926 (I.H. 23022)	.....	1,000.00	698.98

Foreign Countries			
Austria			
1925 (I.H. 22676)	$3,850.00	$.....	$2,823.85
1926 (I.H. 23049)	.....	4,700.00	3,248.89
Brazil			
1925 (I.H. 22375, 22449-53, 22611, 22630-31, 22661)	17,098.81	.....	8,840.19
1926 (I.H. 22829-43, 23050-60, 23073, 23075, 23148)	.....	49,843.00	22,682.74
Canada			
1926 (I.H. 23027, 23076, 23149)	.....	7,500.00	3,952.51
Czechoslovakia			
1926 (I.H. 23138)	.....	1,000.00	.....
France			
1925 (I.H. 22770)	6,720.00	.....	3,441.75
1926 (I.H. 22966, 23061, 23080, 23086)	.....	36,000.00	.....
Hungary			
1926 (I.H. 23065)	.....	500.00	.....
Philippine Islands			
1925 (I.H. 22698)	10,000.00	.....	363.34
Poland			
1925 (I.H. 22605-6)	19,160.00	.....	14,060.48
1926 (I.H. 22967-68, 23147)	.....	18,260.00	6,913.37
Porto Rico			
1926 (I.H. 23134)	.....	617.50	146.76
MALARIA WORK			
Surveys and Demonstrations			
United States			
Alabama			
1925 (I.H. 22507, 22693-94)	4,757.83	.....	1,890.72
1926 (I.H. 23047, 23135)	.....	7,808.33	1,765.09

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
MALARIA WORK—*Continued*			
Surveys and Demonstrations—*Continued*			
United States—*Continued*			
Arkansas			
1925 (I.H. 22629)	$345.84	$.....	$.....
Georgia			
1925 (I.H. 22508)	3,025.57	.....	759.97
1926 (I.H. 22878)	.....	3,500.00	1,544.64
Illinois			
1925 (I.H. 22659, 22674)	625.36	.....	40.28
Louisiana			
1925 (I.H. 22384–86, 22556)	1,776.68	.....	1,270.45
1926 (I.H. 22909–10, 22952)	.....	4,650.00	3,473.89
Mississippi			
1925 (I.H. 22509, 22523, 22525, 22616, 22635)	6,372.71	.....	3,220.77
1926 (I.H. 22953–59)	.....	14,150.00	9,138.41
Missouri			
1925 (I.H. 22557–58, 22660, 22695)	413.33	.....	225.00
1926 (I.H. 22791–92, 23071, 23107)	.....	1,500.00	1,017.75
North Carolina			
1925 (I.H. 22559–62)	4,011.07	.....	2,112.48
1926 (I.H. 22960, 23035, 23072, 23145)	.....	5,675.00	3,233.92
South Carolina			
1925 (I.H. 22563–67)	12,650.00	.....	9,035.86
1926 (I.H. 22961–64)	.....	9,700.00	7,275.00

Tennessee			
1925 (I.H. 22387-90, 22696-97)	$2,094.20	$.....	$1,210.83
1926 (I.H. 22793, 23076)	.....	5,525.00	4,013.95
Virginia			
1925 (I.H. 22511-15, 22568, 22646)	4,128.12	.....	2,721.73
1926 (I.H. 22912-16, 22965)	.....	10,550.00	7,704.46
South America			
Argentina			
1925 (I.H. 22689, 22763-64)	3,555.87	.....	2,418.81
1926 (I.H. 22905-6)	.....	20,855.00	12,108.31
Brazil			
1925 (I.H. 22393-95)	9,029 37	.....	4,407.72
1926 (I.H. 22795)	.....	16,000.00	10,303.96
Central America			
Nicaragua			
1925 (I.H. 22183, 22398)	2,000.00	.....	119.58
West Indies			
Porto Rico			
1925 (I.H. 22400, 22690)	391.04	.....	169.27
1926 (I.H. 22798)	.....	500.00	218.49
Europe			
Austria			
1925 (I.H. 22610)	645 82	.....	627.81
Italy			
1925 (I.H. 22549, 22658)	16,476.98	.....	9,017.61
1926 (I.H. 22796-97)	.....	84,800.00	33,426.71
Spain			
1926 (I.H. 23087)	.....	8,300.00	5,549.36

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
MALARIA WORK—*Continued*			
Surveys and Demonstrations—*Continued*			
The East			
Palestine			
1925 (I.H. 22673)	$5,675.51	$.....	$225.24
Philippine Islands			
1925 (I.H. 22552-53)	7,370.67	.....	4,247.49
1926 (I.H. 22907-8)	.....	7,000.00	3,324.38
Field Studies and Experiments			
Alabama (I.H. 23070)	.....	850.00	.....
Johns Hopkins University, School of Hygiene			
1925 (I.H. 22397, 22692)	601.23	.....	433.77
1926 (I.H. 22903, 23069)	.....	4,290.00	3,867.64
Miscellaneous (I.H. 22740, 22904, 22948)	627.35	4,225.00	2,871.17
Training of personnel			
United States			
Georgia			
1925 (I.H. 22555)	1,153.33	.....	553.52
Georgia and North Carolina			
1926 (I.H. 22951, 23048)	.....	15,280.00	6,680.10
France. Corsica (I.H. 22677)	16,295.00	13,900.00	3,483.61
Miscellaneous			
Motion picture film on malaria (I.H. 22237)	$243.54	$.....	$204.00

YELLOW FEVER			
Brazil			
1925 (I.H. 22500, 22656, 22686, 22754)	88,271.42	.....	69,795.54
1926 (I.H. 22800, 23079, 23144, 23170A)	.....	420,000.00	309,883.38
Colombia and Venezuela			
1925 (I.H. 22167, 22238, 22499)	21,489.66	.....	1,736.71
Mexico and Central America			
1925 (I.H. 22485, 22498)	54,638.51	.....	1,498.82
1926 (I.H. 22801)	.....	5,000.00	150.03
West Africa			
1925 (I.H. 22657)	46,213.20	.....	12,906.70
1926 (I.H. 22802)	.....	100,000.00	53,199.40
Training of personnel			
1925 (I.H. 22361)	2,405.18	.....	1,661.94
1926 (I.H. 22803)	.....	10,000.00	3,428.67
Vaccine and serum			
1925 (I.H. 22171)	991.13	.....	991.13
1926 (I.H. 22804)	.....	7,000.00	4,792.76
History of yellow fever			
1925 (I.H. 22363)	6,058.67	.....	.....
1926 (I.H. 22805, 23023)	.....	11,000.00	2,250.00
STATE HEALTH SERVICES			
Sanitary Engineering. United States			
Alabama			
1926 (I.H. 23010)	.....	1,560.00	658.75
Connecticut			
1925 (I.H. 22462)	1,500.00	.....	375.00
Idaho			
1925 (I.H. 22602)	83.33	.....	83.33
1926 (I.H. 22934)	.....	1,600.00	1,578.67

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
STATE HEALTH SERVICES—*Continued*			
Sanitary Engineering. United States—*Continued*			
Iowa			
1926 (I.H. 23421)	$.....	$58.33	$.....
Maine			
1925 (I.H. 22729)	175.00	.....	175.00
1926 (I.H. 22852)	.....	700.00	350.00
Oregon			
1926 (I.H. 23011, 23101)	.....	1,800.00	767.96
Tennessee			
1926 (I.H. 23165)	.....	571.67	.....
Epidemiology			
United States			
Alabama			
1925 (I.H. 22540)	2,389.10	.....	2,178.78
1926 (I.H. 23012)	.....	5,195.00	2,277.26
Kansas			
1925 (I.H. 22750)	481.69	.....	118.31
1926 (I.H. 22848)	.....	1,200.00	314.63
Kentucky			
1926 (I.H. 23163)	.....	625.00	.....
Louisiana			
1926 (I.H. 23040)	.....	1,912.50	.....
Mississippi			
1926 (I.H. 23013)	.....	3,375.00	1,015.35

Rhode Island			
1925 (I.H. 22761)	$600.00	$.....	$537.68
1926 (I.H. 22847)	.....	1,800.00	1,219.13
South Carolina			
1926 (I.H. 23164)	.....	193.75	.....
South Dakota			
1926 (I.H. 23041)	.....	1,375.00	.....
Tennessee			
1925 (I.H. 22731)	713.22	.....	487.55
1926 (I.H. 22849)	.....	2,900.00	2,055.65
Utah			
1925 (I.H. 22466, 22667)	982.35	.....	.....
1926 (I.H. 23014)	.....	3,000.00	.....
Virginia			
1925 (I.H. 22651)	940.88	.....	184.34
1926 (I.H. 23015)	.....	540.00	.....
Europe. Denmark			
1926 (I.H. 23077)	.....	2,000.00	.....
Vital Statistics			
United States			
Alabama			
1925 (I.H. 22650)	257.50	.....	210.00
1926 (I.H. 23016, 23078)	.....	1,300.00	630.00
Arkansas			
1926 (I.H. 23017)	.....	1,350.00	.....
Iowa			
1926 (I.H. 23018)	.....	2,100.00	1,562.50
Mississippi			
1926 (I.H. 23063)	.....	1,050.00	882.38

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
STATE HEALTH WORK—*Continued*			
Vital Statistics—*Continued*			
United States—*Continued*			
Montana			
1925 (I.H. 22730)	$1,250.00	$.....	$1,250.00
1926 (I.H. 23019)	.....	2,500.00	1,875.00
Oklahoma			
1926 (I.H. 23102)	.....	700.00	306.70
Tennessee			
1925 (I.H. 22732, 22762)	414.41	.....	375.00
1926 (I.H. 22850)	.....	1,500.00	1,125.00
Texas			
1925 (I.H. 22774)	300.00	.....	.....
1926 (I.H. 22851)	.....	1,200.00	.....
West Virginia			
1925 (I.H. 22603)	110.34	.....	110.34
Europe. Denmark			
1926 (I.H. 23039)	.....	1,620.00	.....
Miscellaneous. Jamaica. School Hygiene Unit			
1926 (I.H. 23034)	.....	500.00	330.77
PUBLIC HEALTH LABORATORY SERVICE			
United States			
Alabama			
1925 (I.H. 22537)	3,953.62	.....	3,932.62
1926 (I.H. 23004)	.....	7,500.00	3,880.53

Arkansas			
1925 (I.H. 22455)	$804.59	$.....	$.....
Connecticut			
1925 (I.H. 22256)	450.00	.....	450.00
Maine			
1925 (I.H. 22748)	375.00	.....	325.00
1926 (I.H. 22844)	.....	1,300.00	650.00
Missouri			
1925 (I.H. 22601, 22728)	778.52	.....	450.00
1926 (I.H. 23005, 23133)	.....	2,700.00	.....
Oregon			
1925 (I.H. 22538)	229.68	.....	.....
1926 (I.H. 23094)	.....	750.00	.....
South Carolina			
1925 (I.H. 22749)	500.00	.....	498.92
1926 (I.H. 23006)	.....	300.00	.....
Tennessee			
1925 (I.H. 22492)	48.84	.....	.....
1926 (I.H. 23007)	.....	1,000.00	679.38
Texas			
1925 (I.H. 22895)	441.67	.....	70.83
1926 (I.H. 22933, 23166)	.....	3,000.02	2,660.17
Utah			
1925 (I.H. 22458, 22666)	1,387.50	.....	1,387.50
1926 (I.H. 23008)	.....	3,900.00	.....
Virginia			
1925 (I.H. 22539)	182.73	.....	179.76
1926 (I.H. 23009)	.....	249.65	249.65

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
PUBLIC HEALTH LABORATORY SERVICE—*Continued*			
Central America			
Costa Rica			
1925 (I.H. 22459)	$1,428.69	$.....	$1,011.81
1926 (I.H. 23003)	.....	3,300.00	1,455.60
Guatemala			
1925 (I.H. 22460)	1,711.96	.....	208.60
1926 (I.H. 22845)	.....	3,350.00	1,119.41
Nicaragua			
1925 (I.H. 22461)	1,368.06	.....	1,062.51
1926 (I.H. 22846, 23085)	.....	5,500.00	4,453.93
South America. Colombia			
1926 (I.H. 23084)	.....	4,166.66	.....
PUBLIC HEALTH ADMINISTRATION			
Bureaus of Study and Reform			
Czechoslovakia			
1925 (I.H. 22467)	4,220.00	.....	4,220.00
1926 (I.H. 22853)	.....	7,720.00	6,000.00
France. National Office of Social Hygiene of the Ministry of Labor			
1925 (I.H. 22542, 22644)	20,516.96	.....	4,155.65
1926 (I.H. 23033)	.....	21,000.00	.....
Hungary			
1925 (I.H. 22468)	2,717.65	.....	2,705.32
1926 (I.H. 22854)	.....	5,000.00	3,766.94

Poland			
1925 (I.H. 22604)	$10,000.00	$.....	$6,194.63
1926 (I.H. 22855)	.....	10,000.00	4,076.24
League of Nations			
Toward maintenance of an international interchange of public health personnel			
1923 (I.H. 21633)	2,806.78	.....	.....
1924 (I.H. 22322)	990.71	.....	900.00
1925 (I.H. 22472)	100,000.00	.....	89,121.98
1926 (I.H. 22856)	.....	75,000.00	.....
Toward development of an epidemiological intelligence service			
1924 (I.H. 22032, 22360)	1,580.54	.....	1.25
1925 (I.H. 22471, 22496)	72,840.00	.....	59,334.97
1926 (I.H. 22857, 22859)	.....	57,840.00	.....
Toward cost of training health officers in vital and public health statistics			
1924 (I.H. 22033)	299.46	.....	.....
1925 (I.H. 22473)	21,000.00	.....	19,894.68
1926 (I.H. 22858)	.....	21,000.00	.....
PUBLIC HEALTH NURSING			
Brazil			
1925 (I.H. 22474)	24,137.46	.....	3,754.18
1926 (I.H. 22860)	.....	42,000.00	10,184.98
France			
Central Bureau of Nurses			
1925 (I.H. 22675)	3,900.00	.....	.....
1926 (I.H. 22861)	.....	10,500.00	.....
Public Health Visiting			
1925 (I.H. 22470)	31,616.92	.....	5,060.17
School of Bedside and Public Health Nursing at Nantes (I.H. 22768)	7,000.00	.....	4,027.39

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
PUBLIC HEALTH EDUCATION			
Schools of hygiene and public health			
Brazil			
Institute of Hygiene, São Paulo			
Equipment and supplies (I.H. 22176, 22672)	$2,372.97	$.....	$2,174.10
Department of Hygiene and Legal Medicine of the Medical Faculty of Bahia. Laboratory of Hygiene Equipment (I.H. 22671)	1,450.31	.....	45.71
England. London School of Hygiene and Tropical Medicine			
Operation (I.H. 22475, 22862)	4,991.28	25,000.00	.....
Visiting professor (I.H. 23045)	.....	1,000.00	1,000.00
Hungary. Institute of Hygiene, Budapest. Operation (I.H. 22640)	3,680.00	.....	.....
Poland. School of Hygiene, Warsaw. Support of biochemist (I.H. 22476, 22863, 23096)	1,000.00	4,680.00	4,680.00
United States. Johns Hopkins School of Hygiene and Public Health, Baltimore. Visiting professor (I.H. 23045)	.....	1,000.00	1,000.00
Study and training courses for health officers			
California (I.H. 23100)	.....	300.00	225.46
Mississippi (I.H. 22936)	200.00	.....	150.00
Ohio			
Correspondence courses (I.H. 22687, 22893)	375.00	375.00	750.00
Health Officers' Institute (I.H. 22753, 23168)	74.05	250.00	.....
Training of health workers (I.H. 22235, 22281, 22329, 22541, 22643, 22654, 22678, 22691, 22738, 22751, 22766–67, 22869–70, 22877, 22941, 23032, 23090–91, 23099, 23139–40)	26,365.69	63,500.00	37,470.68
Teaching of hygiene in medical schools			
Harvard Medical School. Preparation of syllabus (I.H. 22752, 23098)	4,500.00	5,500.00	5,500.00

Training Stations. United States. Alabama			
1925 (I.H. 22480, 22534–36, 22670)	$3,034.17	$.....	$1,275.21
1926 (I.H. 22897, 22943–46)	.....	8,750.00	4,198.04
Fellowships			
Grants to doctors for study of public health (I.H. 22276, 22478–79, 22637, 22864–68, 23064, 23088, 23095)	24,481.85	305,500.00	274,613.38
BUILDINGS, EQUIPMENT, AND ENDOWMENT			
Schools of hygiene and public health			
Brazil. Institute of Hygiene at São Paulo (I.H. 23089, 23141)	.....	100,000.00	46,900.00
Canada. University of Toronto, School of Hygiene and Public Health			
Buildings (I.H. 22939)	.....	150,000.00	150,000.00
Interest on endowment (I.H. 22940)	.....	12,500.00	12,500.00
Czechoslovakia			
State Institute of Public Health, Prague. Buildings and equipment (I.H. 21680, 22174, 22497)	678,399.40	.....	239,958.73
England. London School of Hygiene and Tropical Medicine. Land, building, and equipment (I.H. 22733, 22938)	.....	690,000.00	689,628.33
Hungary. Institute of Hygiene, Budapest (I.H. 22639)	205,000.00	.....	140,000.00
Norway. Institute of Hygiene, Oslo. Buildings and equipment (I.H. 22876)	187,000.00	.....	86,050.00
Trinidad. Imperial College of Tropical Agriculture. Toward maintenance of chair of sanitation and tropical hygiene (I.H. 22641, 23142)	148.75	4,900.00	4,885.00
Yugoslavia. School of Public Health, Zagreb. Building and equipment (I.H. 22653, 23097)	56,137.50	34,000.00	88,400.00
United States. Harvard School of Public Health. Toward endowment (I.H. 23022)	.....	25,000.00	25,000.00
Schools of Nursing. Brazil (I.H. 23042, 23143)	.....	130,000.00	30,173.04
Government Health Institutions. Denmark. State Serum Institute, Copenhagen. Buildings and equipment (I.H. 22638)	55,360.00	.....	54,193.61

EXHIBIT G—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
TUBERCULOSIS IN FRANCE			
National Committee for the Prevention of Tuberculosis 1925 (I.H. 22469)	$6,724.70	$.....	$6,724.70
MISCELLANEOUS			
Express, freight, and exchange (I.H. 22481, 22872)	5,740.58	5,000.00	Cr. 2,414.17
Field equipment and supplies (I.H. 22481, 22872)	405.39	5,500.00	5,387.11
Pamphlets and charts (I.H. 22481, 22872)	2,446.01	6,500.00	6,542.89
Hookworm and malaria films donated or lent (I.H. 22201, 22481)	960.00	1,000.00	99.12
Public health literature (I.H. 22871)	.....	1,500.00	830.59
ADMINISTRATION			
Field Staff			
Salaries (I.H. 22481, 22872)	58,345.79	420,000.00	408,230.85
Traveling expenses (I.H. 22481, 22872)	29,458.09	150,000.00	147,745.37
Commutation (I.H. 22481, 22872)	20,902.17	60,000.00	45,463.19
Medical examinations (I.H. 22481, 22872)	558.00	1,500.00	559.60

Drugs for conserving health (I.H. 22481, 22872)	$461.37	$500.00	$14.45
Bonding (I.H. 22481, 22872)	2,012.89	7,000.00	4,378.63
Automobiles (I.H. 22481, 22872)	2,069.86	3,000.00	2,379.59
Insurance and retirement allowances (I.H. 22481, 22872)	36,446.78	50,000.00	41,165.80
Home Office (I.H. 22164-65, 22483, 22873)	23,442.54	198,928.00	197,131.29
Paris Office (I.H. 22482, 22874)	27,954.72	43,120.00	18,199.63
Rio de Janeiro Office (I.H. 22374, 22875)	5,636.26	19,200.00	13,239.14
TOTALS	$2,382,890.12	$4,167,810.30	
Unexpended balances of appropriations allowed to lapse	580,722.36	19,000.08	
NET TOTALS *	$1,802,167.76	$4,148,810.22	$4,084,446.47
Refunds of amounts disbursed in prior years:			
Yellow fever work in Caribbean Littoral and Amazon Valley (I.H. 22267)	$30.00		

* The Foundation appropriated to the International Health Board for its work during the year 1926 the sum of $4,206,400.

EXHIBIT H

1926 CHINA MEDICAL BOARD APPROPRIATIONS *
UNPAID BALANCES OF APPROPRIATIONS MADE IN PREVIOUS YEARS AND PAYMENTS THEREON MADE IN 1926

HOSPITALS OF MISSIONARY SOCIETIES	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
American Baptist Foreign Mission Society.			
Ningpo			
Support of additional staff (C.M. 276). Balance of prior instalments	$11,250.00	$.....	$.....
Shaohsing			
Support of additional staff (C.M. 277). Balance of prior instalments	6,000.00	.....	.....
Residence (C.M. 278)	3,000.00	.....	2,031.69
American Baptist Foreign Missionary Society and the Board of Missions of the Methodist Episcopal Church, South, jointly. Huchow			
Maintenance (C.M. 2752). Instalments for 1925 and 1926	.....	3,900.00	2,100.00
X-ray plant (C.M. 2756)	.....	1,500.00	1,500.00
American Board of Commissioners for Foreign Missions			
Fenchow			
Support of additional staff (C.M. 2519)			
Balance of prior instalments	9,097.24	.....	2,443.81
Maintenance (C.M. 2520, 2757)			
Balance of prior instalments	4,500.00	.....	2,693.75
Instalment for 1926	.....	3,400.00	.....
Tehchow			
Support of additional staff (C.M. 2498)			
Balance of prior instalments	8,000.00	.....	.....

* The Foundation provides for the cost of work carried on by the China Medical Board by making to the Board one or more appropriations to cover its work for the year. From these large grants the Board then makes its own appropriations for specific objects.

Maintenance (C.M. 2571).			
Balance of prior instalments	$4,621.00	$.....	$2,310.50
Instalment for 1926	.....	2,310.50	.....
Board of Foreign Missions of the Methodist Episcopal Church			
Peking			
Support of additional staff (C.M. 2266, 2522)			
Balance of prior instalments	9,000.00	.....	3,000.00
Equipment for dental department (C.M. 2540)	10,000.00	.....	500.00
Maintenance (C.M. 2675)			
Instalment for 1925	3,000.00	.....	3,000.00
Instalment for 1926	.....	2,000.00	.....
Wuhu			
Maintenance (C.M. 2718)			
Instalment for 1925	3,250.00	.....	3,250.00
Instalment for 1926	.....	3,900.00	.....
Building and equipment (C.M. 2499)	18,921.19	.....	14,194.58
Board of Missions of the Methodist Episcopal Church, South. Soochow			
Support of additional staff (C.M. 2418)			
Balance of prior instalments	14,500.00	.....	4,560.00
Board of Foreign Missions of the Presbyterian Church in the U. S. A.			
Changteh. Maintenance (C.M. 2604)			
Balance of prior instalments	7,500.00	.....	3,750.00
Instalment for 1926	.....	3,750.00	.....
Chefoo. Maintenance (C.M. 2603)			
Balance of prior instalments	7,500.00	.....	3,750.00
Instalment for 1926	.....	3,750.00	.....
Hwaiyuen			
Support of additional staff (C.M. 2655-56). Balance of prior instalments	2,625.00	.....	2,625.00

EXHIBIT H.—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
HOSPITALS OF MISSIONARY SOCIETIES—*Continued*			
Board of Foreign Missions of the Presbyterian Church in the U. S. A.—*Continued*			
Hwaiyuen—*Continued*			
Maintenance (C.M. 2657, 2699)			
Balance of prior instalments	$4,125.00	$.....	$750.00
Instalment for 1926	.....	3,375.00	.....
Paotingfu. Maintenance (C.M. 2572)			
Balance of prior instalments	9,000.00	.....	4,500.00
Instalment for 1926	.....	4,500.00	.....
Shuntehfu. Maintenance (C.M. 2573). Balance of prior instalments	1,750.00	.....	1,750.00
Board of Foreign Missions of the Reformed Church in America. Amoy			
Equipment (C.M. 2282)	2,025.00	.....	.....
Support of additional staff (C.M. 2283). Balance of prior instalments	9,405.00	.....	.....
Church of Scotland Foreign Missions Committee. Ichang			
Support of additional staff (C.M. 289). Balance of prior instalments	7,500.00	.....	.....
Maintenance (C.M. 2719)			
Instalment for 1925	675.00	.....	.....
Instalment for 1926	.....	650.00	.....
Domestic and Foreign Mission Society of the Protestant Episcopal Church in the U. S. A. Anking			
Support of additional staff (C.M. 2308). Balance of prior instalments	2,475.00	.....	2,475.00
Construction and equipment of wards and out-patient department (C.M. 2700)	9,000.00	.....	9,000.00
Maintenance (C.M. 2701)			
Instalment for 1925	1,000.00	.....	1,000.00
Instalment for 1926	.....	1,000.00	.....

Foreign Mission Board of the Southern Baptist Convention			
Laichowfu. Support of additional staff (C.M. 279–80).			
Balance of prior instalments	$9,000.00	$.....	$.....
Hwanghien. Support of additional staff (C.M. 281–82). Balance of prior instalments	5,250.00	.....	.....
Yangchow Hospital. Maintenance (C.M. 2765). Instalment for 1926	.....	1,100.00	885.00
London Missionary Society			
Siaochang. Support of additional staff (C.M. 2167, 2725). Balance of prior instalments	1,305.68	.....	.....
Tsangchow. Laboratory equipment (C.M. 2766)	.....	2,000.00	.....
Methodist Women's Hospital in Peking. Nurses' Training School. Support of additional staff (C.M. 2678) Balance of prior instalment	280.71	.....	259.00
Instalment for 1926	.....	550.00	241.85
Nanking University Hospital			
Building and equipment (C.M. 2574)	24,400.00	.....	20,877.85
Maintenance (C.M. 2575)			
Instalment for 1925	9,250.00	.....	9,250.00
Instalment for 1926	.....	9,250.00	.....
United Christian Missionary Society			
Luchowfu. Maintenance (C.M. 2637)			
Balance of prior instalments	16,000.00	.....	14,001.65
Instalment for 1926	.....	8,000.00	.....
Nantungchow. Support of additional staff (C.M. 2218). Balance of prior instalments	8,400.00	.....	.....
United Free Church of Scotland. Mukden. Support of additional staff (C.M. 2714)	600.00	.....	532.50
Loss in exchange. To cover loss in exchange on payments to missionary societies for their hospitals (C.M. 2503)	25,005.49	.....	.....

EXHIBIT H—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
HOSPITALS UNDER CHINESE MANAGEMENT			
Central Hospital, Peking. Support of additional staff (C.M. 2464). Balance of prior instalments	$11,107.11	$.....	$.....
MISSIONARY SOCIETIES. HOSPITALS AND PREMEDICAL EDUCATION			
Yale Foreign Missionary Society. Hsiangya Medical College, Changsha. Support of additional staff of hospital, premedical school, and nurse training school. Mex. 41,605 and $6,645 a year for five years (C.M. 2454–55). Balance of prior instalments	60,234.80	.....	29,529.38
PREMEDICAL EDUCATION			
Fukien Christian University. Toward buildings, equipment, and maintenance (C.M. 2274–76)	22,700.00	.....	.....
Ginling College. Maintenance (C.M. 2721)			
Instalment for 1925	2,750.00	.....	.....
Instalment for 1926	.....	2,200.00	.....
Lingnan University (Canton Christian College)			
Equipment (C.M. 2443)	10,000.00	.....	.....
Support of additional staff (C.M. 2445). Balance of prior instalments	19,522.25	.....	5,546.25
Construction and equipment of science building—Hk 16,022 (C.M. 2631)	13,000.00	.....	.....
Maintenance (C.M. 2761). Instalment for 1926	.....	7,700.00	6,895.00
Nankai College			
Support of additional staff (C.M. 2593). Balance of prior instalments	5,038.45	.....	1,126.11
Maintenance (C.M. 2734). Instalment for 1926	.....	3,893.00	3,425.57
Nanking University			
Toward construction of science building. Mex. 25,000 (C.M. 2680)	2,633.34	.....	1,618.13
Equipment of science departments Mex. 25,000 (C.M. 2681)	10,000.00	.....	5,000.00
Support of visiting professor for one year. Mex. 15,000 (C.M. 2683)	3,750.00	.....	1,590.00

Yenching University			
Maintenance of premedical department (C.M. 2717)			
Instalment for 1925	$13,520.00	$.....	$.....
Instalment for 1926	.....	16,370.00	13,539.28
Construction and equipment of science building (C.M. 2602)	18,105.95	.....	.....
St. John's University, Shanghai. Maintenance of science departments (C.M. 2679). Balance of prior instalments	10,800.00	.....	9,360.00
Instalment for 1926	.....	3,600.00	.....
Shanghai College. Maintenance of science departments (C.M. 2688)			
Balance of prior instalments. Mex. 11,000	6,050.00	.....	6,050.00
Instalment for 1926. Mex. 4,000	.....	2,200.00	66.25
Shantung Christian University			
Additional equipment and alterations for science buildings (C.M. 2727). Mex. 22,546	14,000.00	.....	9,222.62
Books, periodicals, and other literature for premedical department (C.M. 2728). Mex. 2,734	1,700.00	.....	1,437.06
Support of additional staff (C.M. 2729)			
Instalment for 1925. Mex. 5,850	3,600.00	.....	.....
Instalment for 1926. Mex. 5,850	.....	3,600.00	.....
Soochow University			
Furniture and equipment for science department. Mex. 28,000 (C.M. 2673, 2722)	16,205.00	.....	16,205.00
Maintenance of science department (C.M. 2674)			
Balance of prior instalments	6,095.00	.....	5,165.63
Instalment for 1926. Mex. 7,000	.....	4,000.00	.....
Tsinghua College. Maintenance (C.M. 2749)			
Instalment for 1926. Mex. 1,000	.....	600.00	.....
Equipment. Mex. 5,000 (C.M. 2750)	.....	2,900.00	.....
Southeastern University			
Toward construction of science building (C.M. 2587)	31,187.86	.....	3,977.92

EXHIBIT H—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
PREMEDICAL EDUCATION—*Continued*			
Southeastern University—*Continued*			
Scientific equipment. Mex. 25,000 (C.M. 2588)	$15,000.00	$.....	$.....
Support of additional staff (C.M. 2589, 2720). Balance of prior instalments	4,976.43	.....	.....
Instalment for 1926	.....	4,050.00	2,017.62
Yale-in-China. Maintenance of science departments			
(C.M. 2724) 1925–26. Mex. 13,806	8,300.00	.....	7,269.71
(C.M. 2755) 1926–27. Mex. 14,000	.....	7,700.00	.....
Miscellaneous			
Expenses of biological supply service (C.M. 2690)	4,227.98	.....	78.68
Summer Institute for Science Teachers			
1925 (C.M. 2691)	3,000.00	.....	71.22
1926 (C.M. 2751)	.....	3,000.00	2,580.86
MEDICAL EDUCATION			
Medical Schools. Affiliated			
Peking Union Medical College			
Purchase of additional property (C.M. 2381)	799.60	.....	.....
Buildings and fixed equipment (C.M. 2646)	23,811.64	.....	2,331.54
Movable equipment (C.M. 2614)	5,526.72	.....	990.44
Accessories (C.M. 2529)	10,417.30	.....	88.46
Library (C.M. 2624)	1,546.81	.....	793.02
Peking stock (C.M. 2648, 2712)	300,000.00	.....	.....
Engineering survey of mechanical equipment (C.M. 2713)	2,264.66	.....	1,981.31
Second construction program			
Buildings and fixed equipment (C.M. 2744–45)	100,000.00	240,000.00	56,584.81
Movable equipment (C.M. 2746)	.....	10,000.00	375.62

Architectural Bureau (C.M. 2743)	$.....	$16,400.00	$14,278.93
Plans and estimates for new buildings, equipment, and alterations (C.M. 2723)	987.75	.....	900.82
Operation			
Budget 1924–25 (C.M. 2695)	13,406.38	.....	.....
Budget 1925–26 (C.M. 2715, 2730)	208,065.31	444,000.00	604,638.13
Budget 1926–27 (C.M. 2753)	.....	444,000.00	301,855.54
Group insurance and retiring allowances (C.M. 2649, 2696)	1,715.70	.....	Cr. 61.30
Expenses in America (C.M. 2708, 2777)	582.96	5,750.00	5,316.41
Administration. Home Office (C.M. 2707, 2740)	2,621.77	54,110.40	53,174.01
Insurance on buildings and plate glass (C.M. 2684, 2697, 2731)	212.25	100.00	Cr. 16.81
Diet investigation (C.M. 2539)	981.09	.....	.....
Field studies in kala-azar (C.M. 2733)	8,650.62	17,000.00	12,022.59
Special field study in anthropology (C.M. 2778)	.....	13,000.00	.....
Emergency Fund. Care of Wounded Soldiers (C.M. 2748)	10,000.00	.....	.....
Special study of the P.U.M.C. (C.M. 2776)	.....	6,500.00	.....
Student loan fund (C.M. 2758)	.....	1,200.00	.....
Shanghai Medical School			
Purchase of land (C.M. 2269, 2429)	2,031.65	.....	.....
Medical Schools. Unaffiliated			
Hsiangya Medical College. (Hunan-Yale College of Medicine)			
Toward budget for year 1924–1925. Mex. 40,000 (C.M. 2689)	16,960.00	.....	.....
Toward budget for year 1925–1926. Mex. 40,000 (C.M. 2716)	24,000.00	.....	21,679.49
Toward budget for year 1926–1927. Mex. 80,000 (C.M. 2754)	.....	45,000.00	.....
Shantung Christian University			
Maintenance (C.M. 2578, 2694). Balance of 1925 instalment	17,967.77	.....	4,341.56
Instalment for 1926	.....	28,000.00	5,012.50
Loss in exchange on remittances for capital expenditure (C.M. 2693)	30,000.00	.....	.....

EXHIBIT H—*Continued*

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
FELLOWSHIPS AND SCHOLARSHIPS			
For study in the United States and Europe			
Year 1925 (C.M. 2726)	$2,424.95	$.....	$1,919.20
Year 1926 (C.M. 2735)	.....	50,000.00	43,131.15
For study at the Peking Union Medical College			
Chinese Students			
Year 1925 (C.M. 2704)	2,927.94	.....	965.13
Year 1926 (C.M. 2737)	.....	9,000.00	4,817.38
Foreign students			
Year 1925 (C.M. 2703)	2,998.32	.....	112.88
Year 1926 (C.M. 2736)	.....	6,000.00	2,209.00
Students from Lingnan University (Canton Christian College) for study in the medical department of the University of Hongkong (C.M. 2554–58)			
Balance of prior instalments	2,400.00	.....	.....
Instalment for 1926. Hk. 1,600	.....	1,200.00	.....
EDUCATIONAL CAMPAIGN			
Council on Health Education			
Toward general budget (C.M. 2642). Instalment for 1924. Mex. 13,500	7,500.00	.....	7,397.83
For carrying out a special campaign among the middle schools and colleges of China concerning the value and possibilities of scientific medicine (C.M. 2643)			
Instalment for 1924 and 1925. Mex. 9,000	5,000.00	.....	.....
Instalment for 1926. Mex. 4,500	.....	2,500.00	.....

TRANSLATION			
China Medical Association, Publication Committee. For use in its translation work (C.M. 2640). Instalment for 1925–26. Mex. 4,000.....	$3,000.00	$.....	$2,110.00
MISCELLANEOUS			
China Medical Association. Toward current expenses (C.M. 2586)			
Instalment for 1925.....	6,000.00	.....	5,702.98
Instalment for 1926.....	.....	6,000.00	4,776.84
Emergency Fund. For aid of medical work in China, at the discretion of the resident director (C.M. 2711, 2738).....	523.42	1,000.00	441.88
Land and building for Peking Office (C.M. 2671).....	7,190.75	.....	.....
ADMINISTRATION			
Home Office (C.M. 2706, 2739).....	1,747.84	37,473.60	35,449.34
Peking Office (C.M. 2709, 2742).....	10,480.89	34,000.00	25,760.76
Architectural Bureau in Peking Office (C.M. 2747).....	4,173.01	.....	3,186.69
TOTALS.....	$1,425,632.58	$1,588,982.50	
Unexpended balances of appropriations allowed to lapse.....	160,383.27	49,069.48	
NET TOTALS *.....	$1,265,249.31	$1,539,913.02	$1,473,272.60

Refund of amounts disbursed in prior year. Peking Union Medical College

Heavy furniture (C.M. 2378).....	$2,697.88
Hsiangya Medical College (C.M. 2689).....	5,040.00
	$7,737.88

* The Foundation appropriated to the China Medical Board for its work during the year 1926 the sum of $1,600,000.

EXHIBIT I

SUMMARY OF APPROPRIATIONS AND PAYMENTS

	PRIOR APPROPRIATIONS (BALANCES)	1926 APPROPRIATIONS	1926 PAYMENTS
INTERNATIONAL HEALTH BOARD	$1,802,167.76	$4,148,810.22	$4,084,446.47
CHINA MEDICAL BOARD	1,265,249.31	1,539,913.02	1,473,272.60
DIVISION OF MEDICAL EDUCATION	1,830,875.36	1,974,169.21	3,271,856.57
DIVISION OF STUDIES	197,061.54	877,648.30	759,161.34
SCHOOLS OF HYGIENE AND PUBLIC HEALTH *	.....	12,500.00	.....
MISCELLANEOUS	6,307.70	74,700.00	6,445.13
CENTRAL ADMINISTRATION	26,658.36	185,696.89	146,291.55
TOTALS	$5,128,320.03	$8,813,437.64	$9,741,473.66

Prior Appropriations	$5,128,320.03	
1926 Appropriations	8,813,437.64	
TOTAL APPROPRIATIONS		$13,941,757.67
1926 Payments		9,741,473.66
Balance payable on appropriations		$4,200,284.01

In addition to the foregoing, the Foundation has made pledges and appropriations which become effective in future years, and will require for payment the following amounts:

Year 1927	$9,173,307.00
Year 1928	2,614,489.00
Year 1929	2,278,504.00
Year 1930	1,085,293.00
Year 1931	348,495.00
Year 1932	60,000.00
TOTAL	$15,560,088.00

* For other appropriations and payments to schools of hygiene and public health see Exhibit G, Public Health Education, page 410.

EXHIBIT J

STATEMENT OF APPROPRIATIONS AND PAYMENTS ON ACCOUNT OF SPECIAL FUNDS DURING THE YEAR 1926

	PRIOR APPROPRIATIONS	1926 APPROPRIATIONS	1926 PAYMENTS
LAURA S. ROCKEFELLER FUND			
Baptist Home for the Aged of New York City (R.F. 21025)	$.....	$500.00	$333.33
Baptist Home of Northern Ohio (R.F. 21023)	.....	500.00	500.00
Euclid Avenue Baptist Church of Cleveland, Ohio (R.F. 21024)	.....	1,500.00	1,500.00
Ministers and Missionaries Benefit Board of the Northern Baptist Convention. (R.F. 21022)	.....	500.00	500.00
	$.....	$3,000.00	$2,833.33
JOHN D. ROCKEFELLER FUND			
Baptist Home for the Aged in New York City (R.F. 21026-27)	$.....	$1,850.00	$1,850.00
ESTATE OF LAURA S. ROCKEFELLER FUND			
Park Avenue Baptist Church Building Fund (R.F. 21035)	$64.77	$.....	$64.77

EXHIBIT K

STATEMENTS OF PRINCIPAL FUNDS

General Fund

Balance of Mr. Rockefeller's gifts	$165,204,624.50
Securities in Laura S. Rockefeller Fund added to General Fund	40,000.00
Securities in John D. Rockefeller Fund added to General Fund	37,000.00
	$165,281,624.50

This fund is accounted for in securities, secured demand loans, and cash on deposit.

Laura S. Rockefeller Funds

Mrs. Rockefeller's gifts comprising four separate funds	$50,000.00

These funds were disposed of as follows:

Gift of December 9, 1913		
Cash returned to executors of the estate of Laura S. Rockefeller on December 31, 1926, in accordance with a resolution of the Board of Trustees of The Rockefeller Foundation dated November 6, 1926		$10,000.00
Gift of June 7, 1913		
$10,000 par value Colorado Industrial Co. First mortgage 5 per cent bonds	$8,000.00	
Gift of September 11, 1913		
$10,000 par value Colorado Industrial Co. First mortgage 5 per cent bonds	8,000.00	
Gift of November 29, 1913		
$30,000 par value Colorado Industrial Co. First mortgage 5 per cent bonds	24,000.00	
Added to General Fund on December 31, 1926, in accordance with resolutions of the Board of Trustees of The Rockefeller Foundation dated November 6, 1926		40,000.00
		$50,000.00

EXHIBIT K—*Continued*

STATEMENTS OF PRINCIPAL FUNDS—*Continued*

JOHN D. ROCKEFELLER FUND

Mr. Rockefeller's gifts of December 15, 1914, and February 11, 1915, for special purposes.....	$37,000.00

This fund was disposed of as follows:

$37,000 par value Canada Southern Ry. Consolidated Mortgage Series "A" 5 per cent bonds added to General Fund on December 31, 1926, in accordance with a resolution of the Board of Trustees of The Rockefeller Foundation dated November 6, 1926.....	$37,000.00

EXHIBIT L

LAND, BUILDINGS, AND EQUIPMENT FUND

	BALANCE DECEMBER 31, 1925	EXPENDITURES 1926	BALANCE DECEMBER 31, 1926
THE ROCKEFELLER FOUNDATION			
Library	$5,736.89	$699.85	$6,436.74
Equipment	37,409.83	3,893.99	41,303.82
TOTALS, The Rockefeller Foundation	$43,146.72	$4,593.84	$47,740.56
CHINA MEDICAL BOARD			
Peking Office. Land and building	$10,809.25	$.....	$10,809.25
Peking Union Medical College			
Original purchase	171,013.29	.....	171,013.29
Additional land	206,154.44	.....	206,154.44
New buildings	6,972,190.72	73,195.28	7,045,386.00
Alterations, original buildings	293,400.00	.....	293,400.00
Alterations, Chinese houses	5,129.63	.....	5,129.63
Movable equipment	454,201.18	1,366.06	455,567.24
Accessories	384,966.40	88.46	385,054.86
Supplies	*20,200.09	.....	20,200.09
Heavy furniture for staff residences	7,258.04	2,697.88Cr.	4,560.16
Library	86,453.19	793.02	87,246.21
Street improvements	8,899.72	.....	8,899.72

Shanghai Medical School Land	298,331.95	.....	298,331.95
TOTALS, China Medical Board	$8,919,007.90	$72,744 94	$8,991,752.84
GRAND TOTALS	$8,962,154.62	$77,338.78	$9,039,493.40

SUMMARY

Balance, December 31, 1925	$8,962,154.62
Expenditures 1926	77,338.78
Balance, December 31, 1926	$9,039,493.40

EXHIBIT M

SCHEDULE OF SECURITIES IN GENERAL FUND ON DECEMBER 31, 1926

Bonds

Name	Interest Rate Per Cent	Date of Maturity	Amount	Foundation's Ledger Value Per Cent	Foundation's Total Ledger Value
American Telephone & Telegraph Co. Thirty-year Collateral Trust	5	Dec., 1946	$100,000.00	97.75	$97,750.00
Armour & Co. Real Estate First Mortgage	4½	June, 1939	1,000,000.00	93.25	932,500.00
Atlantic & Birmingham Ry. First Mortgage (Certificates of Deposit)	5	Jan., 1934	677,000.00	53.	358,810.00
Atlantic Refining Co. Notes	4½	Jan., 1927	400,000.00	99.51	398,040.00
Atlantic Refining Co. Notes	4½	July, 1927	400,000.00	99.51	398,040.00
Baltimore & Ohio R. R. Refunding and General Mortgage	5	Dec., 1995	650,000.00	99.75	648,375.00
Canada Southern Ry. Consolidated Mortgage Series "A"	5	Oct., 1962	37,000.00	100.	37,000.00
Chicago & Alton R. R. Refunding Mortgage	3	Oct., 1949	551,000.00	65.	358,150.00
Chicago & Alton Ry. First Lien	3½	July, 1950	854,000.00	53.	452,620.00
Chicago City & Connecting Railways Collateral Trust (Certificates of Deposit)	5	Jan., 1927	1,305,000.00	52.	678,600.00
Chicago, Milwaukee & St. Paul Ry. General Mortgage Series "A"	4	May, 1989	30,000.00	97.	29,100.00
Chicago, Milwaukee & St. Paul Ry. General Mortgage Series "C"	4½	May, 1989	500,000.00	103.	515,000.00

Chicago, Milwaukee & St. Paul Ry. Debenture (Certificates of Deposit)	4	July, 1934	450,000.00	52.50	236,250.00
Chicago, Milwaukee & St. Paul Ry. General and Refunding Mortgage Series "A" (Certificates of Deposit)	4½	Jan., 2014	500,000.00	52.50	262,500.00
Chicago, Milwaukee & St. Paul Ry. Receivers Equipment Trust Series "D"	5	$133,000 due Aug. 1 each year 1927–40	1,862,000.00	98.25	1,829,415.00
Chicago & North Western Ry. Sinking Fund Debenture	5	May, 1933	80,000.00	102.	81,600.00
Chicago Railways Co. First Mortgage	5	Feb., 1927	500,000.00	97.	485,000.00
Cleveland, Cincinnati, Chicago & St. Louis Ry., St. Louis Division Collateral Trust	4	Nov., 1990	73,000.00	90.	65,700.00
Cleveland, Cincinnati, Chicago & St. Louis Ry. General	4	June, 1993	700,000.00	83.893	587,250.00
Cleveland Short Line First Mortgage	4½	Apr., 1961	500,000.00	95.	475,000.00
Colorado Industrial Co. First Mortgage	5	Aug., 1934	2,050,000.00	80.	1,640,000.00
Dominion of Canada, Government of, Fifteen-year	5	Apr., 1931	500,000.00	94.565	472,825.00
Erie R. R. General Mortgage Convertible Fifty-year Series "B"	4	Apr., 1953	1,065,000.00	74.7175	795,742.30
Illinois Central R. R. Refunding Mortgage	4	Nov., 1955	300,000.00	87.	261,000.00
Illinois Central R. R. Equipment Trust Certificates Series "M"	4½	$80,000 due May 1 each year 1929–41	1,040,000.00	98.50	1,024,400.00

EXHIBIT M—*Continued*

NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
Interborough Rapid Transit Co. First Mortgage (Stamped)	5	Jan., 1966	$1,750,000.00	96.8571	$1,695,000.00
International Mercantile Marine Co. First and Collateral Trust Sinking Fund	6	Oct., 1941	2,848,000.00	97.5	2,776,800.00
Interstate Natural Gas Co. Inc. First Mortgage Ten-year Sinking Fund with warrants attached	6	July, 1936	2,000,000.00	105.	2,100,000.00
Lake Erie & Western R. R. Second Mortgage	5	July, 1941	100,000.00	100.	100,000.00
Lake Shore & Michigan Southern Ry. First Mortgage	3½	June, 1997	926,000.00	87.	805,620.00
Lake Shore & Michigan Southern Ry. ✱ Debenture	4	May, 1931	1,673,000.00	92.	1,539,160.00
Missouri, Kansas & Texas R. R. Prior Lien Series "A"	5	Jan., 1962	331,250.00	78.5	260,031.25
Missouri, Kansas & Texas R. R. Prior Lien Series "B"	4	Jan., 1962	331,250.00	64.5	213,656.25
Missouri, Kansas & Texas R. R. Adjustment Series "A"	5	Jan., 1967	96,800.00	61.5	59,532.00
Morris & Essex R. R. First and Refunding Mortgage	3½	Dec., 2000	175,000.00	82.75	144,812.50
Mutual Fuel Gas Co. First Mortgage	5	Nov., 1947	250,000.00	100.	250,000.00

National Railways of Mexico Prior Lien Fifty-year Sinking Fund with July 1, 1914 and subsequent coupons attached	4½	July, 1957	50,000.00	60.3275	30,163.75
Secured 6% Notes for coupon due January 1, 1914	.....	Jan., 1933	1,125.00	59.	663.75
Certificate Series "A" Interest in arrears	.....	.....	7,357.50	5.50	404.66
Certificate Series "B" Interest in arrears	.....	.....	13,500.00	.50	67.50
New York Central Lines Equipment Trust of 1913	4½	Jan., 1927-28	72,000.00	99.0393	71,308.30
New York Central & Hudson River R. R. Thirty-year Debenture	4	May, 1934	330,000.00	88.45	291,885.00
New York, Chicago & St. Louis R. R. First Mortgage	4	Oct., 1937	35,000.00	95.	33,250 00
New York, Chicago & St. Louis R. R. Debenture	4	May, 1931	1,303,000.00	87.	1,133,610.00
New York Connecting R. R. First Mortgage	4½	Aug., 1953	500,000.00	95.69073	478,453.65
Northern Pacific Ry. Refunding and Improvement Mortgage	4½	July, 2047	390,000.00	91.577	357,150.00
Pennsylvania R. R. Consolidated Mortgage Sterling	4	May, 1948	£2,400.00	99.	11,880.00
Pennsylvania R. R. General Mortgage	4½	June, 1965	$1,500,000.00	98.25	1,473,750.00
Pennsylvania R. R. Equipment Trust Certificates Series "D"	4½	$30,000 due May 15 each year 1929-41	390,000.00	98.50	384,150.00
Philadelphia & Reading Coal & Iron Co. Refunding Sinking Fund	5	Jan., 1973	167,000.00	94.25234	157,401.42
Pittsburg, Cincinnati, Chicago & St. Louis Ry. Consolidated Mortgage Series "I"	4½	Aug., 1963	500,000.00	103.	515,000.00

EXHIBIT M—*Continued*

NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
Reading Co. General and Refunding Series "A"	4½	Jan., 1997	$333,000.00	94.25	$313,852.50
Rutland R. R. First Consolidated Mortgage	4½	July, 1941	25,000.00	90.	22,500.00
St. Louis-San Francisco Ry. Prior Lien Series "A"	4	July, 1950	1,500,000.00	72.75	1,091,250.00
Seaboard Air Line Ry. Adjustment Mortgage	5	Oct. 1949	455,000.00	77.	350,350.00
Southern Pacific Co. Equipment Trust Certificates Series "I"	4½	$100,000 due June 1 each year 1931–41	1,100,000.00	98.50	1,083,500.00
Southern Pacific R. R. First and Refunding Mortgage	4	Jan., 1955	100,000.00	86.	86,000.00
Standard Oil Co. (New Jersey) Twenty-year Gold Debentures	5	Dec. 15, 1946	10,000,000.00	100.5	10,050,000.00
United States Fourth Liberty	4¼	Oct. 15, 1938	1,075,000.00	93.21347	1,002,044.80
United States Second Liberty Converted	4¼	Nov. 15, 1942	2,100,000.00	93.00921	1,953,193.40
United States Government Treasury Notes Series "B"	4¼	Mar. 15, 1927	3,000,000.00	100.	3,000,000.00
United States Government Treasury Notes Series "A"	4½	Dec. 15, 1927	4,000,000.00	100.	4,000,000.00
Wabash R. R. Second Mortgage	5	Feb., 1939	120,000.00	97.8	117,360.00

Washington Ry. & Electric Co. Consolidated Mortgage	4	Dec., 1951	450,000.00	83.5	375,750.00
Western Maryland R. R. First Mortgage	4	Oct., 1952	1,032,000.00	78.8913	814,158.76
Wheeling & Lake Erie R. R. Equipment Trust Series "B"	5	Apr., 1927	50,000.00	99.75	49,875.00
TOTAL BONDS	.....	.....	.....	.....	$52,314,251.79

STOCKS

NAME	NUMBER OF SHARES	FOUNDATION'S LEDGER VALUE PER SHARE	FOUNDATION'S TOTAL LEDGER VALUE
American Ship Building Co. Common	24,260	$54.173537	$1,314,250.00
Anglo-American Oil Co., Ltd. (Par £1)	366,517	18.874803	6,917,936.32
Anglo-American Oil Co., Ltd. (Par £1) Non-voting	122,172	18.874803	2,305,972.49
Atchison, Topeka & Santa Fe Ry. Preferred	5,000	98.25	491,250.00
Atchison, Topeka & Santa Fe Ry. Common	21,100	95.2563	2,009,908.33
The Buckeye Pipe Line Co. (Par $50)	49,693	100.	4,969,300.00
Central National Bank, Capital	950	177.8538	168,961.10
Chehalis & Pacific Land Co. Capital	220	14.502	3,190.47
Chicago City & Connecting Rys. Participation Certificates Preferred	17,530	15.	262,950.00
Chicago City & Connecting Rys. Participation Certificates Common	10,518	2.	21,036.00
Chicago & Eastern Illinois Ry. Preferred	3,000	34.	102,000.00
Cleveland Arcade Co. Capital	2,500	98.6222	246,555.56

EXHIBIT M—*Continued*

NAME	NUMBER OF SHARES	FOUNDATION'S LEDGER VALUE PER SHARE	FOUNDATION'S TOTAL LEDGER VALUE
Cleveland Trust Co. Capital	457	$195.7541	$89,459.62
Colorado & Southern Ry. First Preferred	4,800	54.	259,200.00
Consolidated Gas Co. of New York Common (No par value)	40,000	60.5889375	2,423,557.50
Continental Oil Co. (Par $10)	100,000	6.951916	695,191.60
The Crescent Pipe Line Co. (Par $25)	14,120	35.	494,200.00
Cumberland Pipe Line Co.	6,000	40.6666	244,000.00
Eureka Pipe Line Co.	12,357	162.	2,001,834.00
Galena-Signal Oil Co. Preferred	4,193	139.7	585,779.50
Galena-Signal Oil Co. Common	20,000	50.812835	1,016,256.70
Great Lakes Towing Co. Preferred	1,527	88.7361	135,500.05
Great Lakes Towing Co. Common	1,200	12.	14,400.00
Indiana Pipe Line Co. (Par $50)	24,845	105.1111	2,611,485.28
Kanawha & Hocking Coal & Coke Co. Preferred	202	100.	20,200.00
Kanawha & Hocking Coal & Coke Co. Common	668	90.953	60,756.40
Manhattan Ry. Capital (Modified Guarantee)	10,000	100.	1,000,000.00
Missouri, Kansas & Texas R. R. Co. 7% Preferred	9,531	40.	381,240.00
National Transit Co. (Par $12.50)	126,481	28.5	3,604,708.50
New York Transit Co.	12,392	122.	1,511,824.00
Northern Pacific Ry. Common	700	91.7625	64,233.75
Northern Pipe Line Co.	9,000	95.	855,000.00
Pere Marquette Ry. Preferred	5,740	54.56502	313,204.35
Provident Loan Certificates ($1,000 par)	242	100.	242,000.00
The Solar Refining Co.	9,076	92.5035	839,561.76

Southern Pipe Line Co. (Par $50)	24,845	85.	2,111,825.00
South West Pennsylvania Pipe Lines	8,000	125.	1,000,000.00
Standard Oil Co. (Indiana) (Par $25)	460,760	43.35	19,973,946.00
Standard Oil Co. (New Jersey) Common (Par $25)	919,500	36.475	33,538,762.50
Standard Oil Co. (New Jersey) Common (Par $25) Rights	919,500	.....	.....
The Standard Oil Co. (Ohio) Common	33,912	102.	3,459,024.00
The Standard Oil Co. (Ohio) Preferred Non-voting Cumulative	17,088	106.	1,811,328.00
Tilden Iron Mining Co. Capital	1,780	27.35	48,683.46
Union Tank Car Co. Capital	60,000	26.768133	1,606,087.97
Western Pacific R. R. Corporation Preferred	28,609	30.705971	878,467.15
Wilson Realty Co. Capital	591	100.	59,100.00
Woman's Hotel Co. (in Liquidation) Capital 80% Paid	300	.....	.....
TOTAL STOCKS	.....	.....	$102,764,127.36

EXHIBIT M—*Continued*

SUMMARY

Bonds	$52,314,251.79
Stocks	102,764,127.36
TOTAL LEDGER VALUE OF INVESTMENTS BELONGING TO GENERAL FUND	$155,078,379.15

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