Small-pox.

Small-pox as an infection introduced from abroad is reported on thus:

"A noteworthy feature of the small-pox statistics received from abroad is the evidence which they provide of the respective incidence of the mild type and of the severe type of the disease. The statistics available indicate that in 1922 the mild non-fatal type was the rule in Finland, Germany, Switzerland, Egypt, Cuba, Jamaica, South Africa and parts of Canada and the United States, while the severe type prevailed in most tropical countries and in Russia, Poland, Japan and parts of Central and South America. In a few countries (notably Ontario) the mild type which prevailed during the early months of the year was followed, after an interval, by an epidemic of the severe type, and in one or two (as in Portugal and England) where both types appeared during the year, it was found that the two seemed to run concurrently, some localities experiencing only the mild type, others only the severe type."

Dysentery.

Among the 729 cases in England in 1922 were included a large proportion of instances of relapsing amoebic dysentery among ex-service men. In Wales there was an outbreak of 1,100 cases of bacillary dysentery, with low mortality. It was conveyed at first by contaminated water, and the infection may have been derived from demobilized soldiers.

Trench Fever.

Only 6 cases of trench fever were reported—all ex-service men.

Yellow Fever.

The position as to yellow fever seems favourable, though it persists in various localities in South and Central America, including Mexico.

Typhus.

The prevalence of typhus fever in Russia seems to have doubled in the first five months of 1922. It is, however, a louse-carried disease against which organized sanitary administration is effective if the simultaneous arrival of large numbers of infected persons can be avoided. From this point of view the preventive work carried on in the border States of Russia with the aid of the League of Nations is of great importance. The need for the control of destitute immigrants from infected areas is exemplified in the emigration of Greeks from Anatolia and Eastern Thrace.

MEDICAL INTELLIGENCE.

The Intelligence Division of the Ministry is organized in two sections, lay and medical. Information is collected from home and foreign sources and distributed. Recent information published in books and journals is noted. Prompt and regular news of the incidence of dangerous epidemic diseases at ports and elsewhere abroad is collected, and a weekly bulletin issued to health officers and others specially concerned. In 1922 information was received from 170 consuls or other official representatives abroad, and 5,248 telegrams or dispatches were received, besides many printed statistical returns. Office committees were formed to investigate questions relating to scarlet fever, cocaine substitutes, chlorosis, small-pox diagnosis, cancer, rheumatism, and grant-aided public health expenditure.

International health work is notably developing, bringing the Ministry's medical officers into touch with their colleagues in foreign countries, the British Dominions and Colonies, India, and Egypt. The maintenance of a health organization will, in future, form part of the permanent functions of the League of Nations. The work done can be studied in the publications of the Office International d'Hygiène Publique. Progress has been made with the international agreement for treatment of venereal disease in merchant seamen, and additional countries are falling in with the scheme. Contributions from the Rockefeller Foundation have helped further development in intelligence work and health statistics, and have also helped to make possible such an educational visit as was paid to this country last year by about thirty medical officers from different foreign countries.

INVESTIGATION AND RESEARCH.

Work at the Ministry's laboratories related to pneumococcus and investigations into the serological characters of

different strains of diphtheria bacilli. Routine work included preparation of antirabic vaccine, examination of food materials for *B. botulinus*, examination of shaving brushes, etc., for anthrax, examination of specimens from cases of suspected infectious disease, of Grade A milk, and of food samples. The Auxiliary Scientific Investigation Fund was spent on special work relating to public health, as on Wassermann tests in the newborn, study of the Schick test, and of mosquito life. Liaison with the Medical Research Council was maintained, partly by membership of special committees. Statistical investigations of various sorts were conducted, and many questions of interpretation of data, etc., dealt with. Epidemiological inquiries have already been mentioned.

Rheumatism.

The Interdepartmental Committee on Rheumatism, of which Sir George Buchanan is chairman, began by making an estimate of the respective incidence of the various forms of "rheumatic" diseases in relation to age, sex, occupation, and environment. A large team of insurance practitioners entered with zest into the scheme. "Fifty practitioners fulfilled for the whole year the arduous task of recording, on a uniform plan, every case of rheumatic disease occurring in an insured person in their practices," and a population of 90,000 insured persons has been in this way kept under review. This is the first group inquiry on these lines, and a great advantage is that the population at risk, represented by this sample, is fairly accurately known. The regional medical officers have made inquiry on the same plan as regards 5,000 cases referred to them. The rheumatic diseases were classified under nine headings, and these were placed in three groups—(1) acute, (2) non-articular, and (3) chronic joint change.

Goitre.

The causation and prevention of goitre, as it occurs in widely separated districts of England, have been studied. The simultaneous occurrence of enlarged thyroid in a number of children at cottage homes was carefully investigated by Dr. Adams. Other subjects of investigation were an outbreak of "pink-eye" amongst scholars at a college, the dermatitis of bakers—so-called "baker's itch"—and alleged tetrachlorethane poisoning in toilet saloons.

KITCHENER MEMORIAL MEDICAL SCHOOL AT KHARTUM.

BY

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THE object of the Kitchener Memorial Medical School is to provide a sound medical training for young Sudan Arabs so as to meet the large demand for doctors which at present exists and which is likely to increase very greatly during the next few years as the schemes at present in hand for the economic development of the Sudan come into action and are gradually extended.

The need for this school was first urged by Lord Kitchener during his last visit to the Sudan; he looked on it as the most important step in the completion of the educational scheme which he initiated when he founded the Gordon Memorial College.

The foresight and imagination shown by Lord Kitchener in founding this college immediately after the battle of Omdurman at a time when over three-quarters of the population had died from famine and disease, and the land was deserted and uncultivated, has been more than justified by results. The recovery of the Sudan has been phenomenal and it could not have taken place without the agency of this institution.

The Sudanese, with the exception of the inhabitants of the extreme south, are an Arab race differing from the Egyptians in physical characteristics, in ideals, history, and origin; they are quick, intelligent, eager for education, and

intensely loyal to the British connexion. They are, moreover, extremely anxious to have young men of their own race trained as doctors and they have themselves subscribed over £11,000 to this project. In addition to this, one Sudan merchant has bequeathed all his property now in his lifetime to be held by trustees; the interest, a matter of £1,200 a year, is to be devoted to the maintenance of medical students during their period of study.

Scope of the Project.

The immediate intention is to train as assistant doctors young men selected from the final year students of the Gordon College.

The selection will be based on honesty of character, energy, and power of initiative, as well as on proficiency in their studies. They will have received a thoroughly sound secondary education including a good knowledge of English, which will be the sole medium of instruction. The number of entries each year will at first be limited to twelve. The period of instruction will be four years. During the first two years the instruction given will include the preliminary sciences and anatomy, histology, physiology, and materia medica. The last two years will be occupied with the purely professional subjects. Special emphasis will be laid on hygiene and tropical medicine.

Work in the out-patient department will commence from the first year. Students who have conscientiously carried out their course of studies and who have satisfied their teachers and their examiners that they have attained the required standard, will be awarded a diploma authorizing them to practise in the Sudan only.

The object aimed at will be to obtain thoroughly conscientious assistant doctors accurately trained up to a definite standard and absolutely reliable up to the limit of that standard, but who would not be expected or allowed to attempt the higher grade work of the highly trained physician or surgeon.

These assistant doctors will often be stationed in isolated posts, but they will be under the general direction and advice of British medical inspectors.

That the Sudan Arabs can be trained to be useful doctors has been shown by experiments carried out at Khartum Civil Hospital. A few selected youths have been trained at this hospital as assistant medical officers, and in spite of the impossibility of giving them a scientific medical training owing to the lack of laboratory accommodation and of the equipment necessary for a teaching school, and to the insufficient teaching staff available, a considerable proportion of these purely empirically trained assistant medical officers have proved themselves to be men of marked ability and have performed very valuable work in combating epidemics and in rendering simple surgical and medical assistance to the people among whom they have been working.

At a later date, when the pressing need for doctors has been met and a suitable teaching staff has been built up, it is proposed to extend the length of the curriculum to five years and to bring the standard of the curriculum and of the examinations up to the standard demanded by British medical schools; the preliminary sciences will by then be included in the curriculum of the Gordon College.

It is thus hoped in the not distant future to have a medical school at Khartum which will take a leading place in the civilizing and development of North-East Africa, and which, working in close liaison with the older schools of Europe and America, will produce really good scientific work.

Facilities for Teaching.

A medical school building is in course of construction, and will be completed by November next; it contains a lecture theatre and laboratories for the teaching of the preliminary sciences and of anatomy, physiology, and pathology. The site of this building is opposite to the Civil Hospital and only a few yards from it on the main road leading from the railway station to the Palace.

The clinical teaching, clerking, dressing, etc., will be carried on at the Khartum Civil Hospital, a well equipped modern hospital of a hundred beds with an x-ray installation and clinical laboratory. A new and well equipped out-patient department has just been added, so as to afford greater facilities for out-patient teaching.

Teaching Staff.

For the present the teaching will be carried out by the Government medical and scientific staff, including the director and staff of the Wellcome Tropical Research Laboratories, which are situated within ten minutes' walk of the medical school buildings. In addition to the Government staff a medical registrar will be appointed whose whole time will be spent on the medical school work.

It is recognized that this can only be a temporary arrangement for a few years, and that later it will be necessary to increase the whole-time teaching staff considerably.

Need for the School.

It has been pointed out that the object of the school is to build up a service of Sudanese doctors which will enable the diseases and epidemics of the Sudan to be dealt with more effectually both by medical and hygienic measures, and which will render it possible to establish the hygienic conditions necessary to enable the schemes of economic development at present in course of execution and their subsequent extensions to be carried out successfully.

At present there are immense areas throughout the Sudan, and especially in the southern regions, in which the population is completely out of reach of any hospital and cannot be visited by Government medical officers. In consequence the loss of life from untreated disease and unchecked epidemics is very great. In particular the following diseases call urgently for further medical and hygienic action:

(a) In the extreme south and south-west sleeping sickness is exacting a heavy toll from the population, and in the south-west, Bahr-el-Ghazal, this disease has increased greatly during the last few years. There is always the danger of it becoming acutely epidemic.

(b) On the Blue Nile kala-azar appears to be on the increase.

(c) In the southern Sudan also great numbers of the population are attacked by yaws and syphilis, and these diseases appear to be rapidly gaining ground.

(d) Bilharziasis, ankylostomiasis, and trachoma are widely spread in the northern and central Sudan, and it is essential to stamp out these diseases before they have got such a hold on the population as to render this practically impossible, as is the case in Egypt.

(e) The population of the central Sudan is annually prostrated with malaria, which is largely preventable.

As regards the economic development of the Sudan which has been referred to above, a dam is being built across the Blue Nile 170 miles south of Khartum, and 300,000 acres of the fertile Gezira plain will be placed under perennial irrigation for cotton cultivation. The railway also is being pushed through to Kassala so as to link up this potentially rich country with Port Sudan, thus enabling large areas of the fertile Gash delta to be brought under cotton cultivation on a profitable basis. The cotton-growing areas of the Sudan can be extended almost indefinitely. In the Gezira alone over a million acres of ideal cotton-growing land await development, and there are further enormous areas in Kassala Province and up the White Nile and Sobat rivers which will gradually be brought under cotton cultivation.

There is just sufficient man-power in the Sudan to meet the needs of this development, but none to spare. It is essential that there should be no wastage of man-power, and that there should be a steady increase of the population to meet the progressive development foreshadowed above. The whole success of this development, therefore, depends on adequate medical and hygienic arrangements being carried out, and this cannot be done without a largely increased supply of doctors.

In addition to these considerations it is confidently expected that an increase of doctors in the southern regions will greatly facilitate the administration of these partially pacified countries. The quickest and surest way to pacification and civilization in Central Africa is to increase enormously the number of doctors.

It is difficult to think of any other way in which such far-reaching results can be obtained for such a trifling expenditure, so much suffering relieved, so much work done towards enabling the great potential wealth of this country to be developed.