

THE GOVERNMENT SERUM LABORATORY.

PHRAPATOOM, SIAM.

DR. RALPH T. EDWARDS.

THE institution was founded some six years ago by Dr. H. Adamsen, a Eurasian, who was educated in America.

In 1902 or 1903, he went to Manila to see the Government Laboratory there, and after a study of the methods there, came back full of enthusiasm for the work in his own country.

After a great deal of trouble and disappointment he was able to make a vaccine against small-pox that would produce the beautiful arm the Siamese desire.

Vaccination in Siam is not a new thing, as it was introduced many years ago by the American missionaries and has flourished to a greater or less extent ever since. One of the chief means of its continuance is the ever present Chinaman who is always looking for a way to earn some money, "easily" if possible but in any way if not easily. It is in great measure his fault that the people wish a bad sore or think that it does not "rise", as in his desire to have the people think that the take is good, he resorts to tricks of infection, making at times a terrible sore, as he does not get any money for the job if not successful. In former years much of the vaccine came from Europe and in the hot season not much of it came to the hands of the vaccinator in full strength and here again the tricks were brought into play to make the people think they had a take. Thus it has come to be the popular belief that in the hot season takes are scarce and when they are secured are dangerous. While the first is true in a measure, because hot weather is inimical to small-pox and vaccination, the latter is far from true as we have often proved by the use of clean vaccine. Because of this belief we have our greatest sales from November to February and the rest of the year we have a very slack time so far as vaccine work is concerned. Last November, we sold almost 40,000 doses while in May this year we shall probably not sell more than 1,000 doses, but at the same time we must work to keep the seed strong enough to do good work when there is vaccination to do.

The work of making vaccine under Dr. Adamsen, seems to have done great good here, but in 1906 his other interests were so great that he did not have time to tend to the vaccine work and at his suggestion Dr. Woolley was secured from Manila to carry on the work. Under Dr. Adamsen the Laboratory was at Bangkok, but at the time of changing directors it was deemed best to bring it to Phrapatoom.

Dr. Woolley was director here for a little more than one year, when the Government offered him a position in Bangkok in which he was also to have the position of advisor to the laboratory, and Mr. J. R. Redfield was acting

director during the greater part of a year. The author of this paper came here to be director in April 1908, as April begins the official year here.

There has been a steady increase in the strength of the vaccine from the start if we may judge from the results on cattle, as during the first year the average scraping of vaccine from a calf was 17.47 grams, or enough to vaccinate 437 people, the second year's average under Dr. Woolley and Mr. Redfield was 19.03 grams, or enough to vaccinate 476 people, during my first year it was 23.17 grams, or enough to vaccinate 579 people, while this year it is 43.84 grams, or enough to vaccinate 1,096 people. This year we secured enough to vaccinate 2,050 people, 82 grams from one calf while never before has there been more than 60 grams, or enough to vaccinate 1,500 people secured from one calf at this place. The increase of the last year seems to me to be due to the fact that we were able to get some absolutely new seed to add to the seed used in vaccinating calves. This was done as follows: scabs from a case of small-pox were taken and used to vaccinate a calf, and this seed was used on a second calf till the seed had passed through ten generations on the calves after which we thought it safe to use on people. The first time we used it, we mixed it with other vaccine of the old stock and watched the result on cases close at hand and when it acted well in those cases we sent it out with the sale vaccine and from then on the amount we were able to secure from the individual calves increased. The work of vaccination here is probably about as great as it will ever be unless the opening of the Peninsular Railway increases it on account of the increased ease with which the vaccine can be delivered. Then too the northern railroad will give added facilities in that direction when it is built. The Siamese people believe in vaccination for their children, but as for themselves they do not think it would pay, as most of them show the marks of small-pox on their faces. However I had the opportunity of vaccinating quite a number of men who had had small-pox when children, and of all that I vaccinated of that kind last year there were 55 per cent. of takes, showing that there is a chance for a second attack of small-pox here as well as in the Phillippine Islands, where there are records of three cases in the same person. Then too they do not believe in re-vaccination though there will a slightly larger per cent. respond to vaccination than of those who have had small-pox when children. With the present facilities for transportation it seems that there is little chance for increasing the number of vaccinations which are now about 100,000 per year, though we sell more than 100,000 doses of vaccine.

Rinderpest is reported in some parts of the country from time to time, but during Dr. Woolley's service here and so far during my service we have not been able to find it. Dr. Adamsen did a little work on rinderpest and on anthrax, but once he made the mistake of thinking a case of anthrax was rinderpest and lost a whole shed full of cattle by anthrax. Dr. Woolley did

some work at immunizing cattle against anthrax, but we did not think that in view of the fact that there has been no anthrax seen by any member of the laboratory staff for several years, though numerous small expeditions have been sent out, it was worth while to endanger the cattle of the surrounding country by working with anthrax with the chance of spread of infection there was in the present condition of the compound, where all the waste of the pens is carried all over the country below during the high water. For that reason we have refrained from work on anthrax, though it is an attractive field from a scientific standpoint. Though we have asked for it, we have not been able to get a separate room for other work until the present, and we have therefore refrained from endangering the vaccine by attempting anything else in scientific work. The coming year ought to see a marked advance in that line.

Do not think that this is all that has been done here, as the piece of ground which was dedicated to the work of this institution is a swamp and jungle combined, or was in the beginning. The jungle is cleared off but a great part of the swamp remains, as at present about one-fourth of the compound is under water though it is many months since the wet season closed, and it will take four more years with the force allowed to make the whole compound fit for the work. There are three chief ways in which we can get dirt for filling here. First and perhaps least, is by digging off the earth where the ground is above high water and using it to fill where the ground is low. Second, by digging a big trench or small canal all around inside the border of the compound which plan also assists in the fencing. But the chief way is by digging big ponds or wells as they are called in places where the ground is very low and using that dirt to fill where the surface is not quite so low. Last year we filled during the dry season, a surface of about 40,000 square feet from a well whose area was about 75 feet by 100 feet. As such work can only be done in the dry season, or a little less than half of the year, it has to be varied by the other two plans.

While for the present the institution is doing nothing but vaccine work, there is a field for other work, and if the Government does not weary in well doing there will finally be a good working institution for scientific and serum work.

Frolic ! Darling popsy-wopsy !

Mammy doesn't mind,

Make the happy home a scrap heap

If you feel inclined.

"Westminster Gazette" Competition.