

NEWS OF NATIONAL SOCIETIES

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Thailand

Under the heading *Science Section, Queen Saovabha Memorial Institute (Pasteur Institute)*, the Thai Red Cross published some time ago a pamphlet on the historical background and the very interesting activities of one of its sections. In doing this, it has given an example of the many possibilities open to a National Society—if it keeps itself abreast of progress—to apply the humanitarian principles in the most varied of fields and especially in those which obtain their inspiration from scientific processes. At a time when scientific development is causing no little anxiety, such an example is indeed most stimulating.

Originally known as the “Institut Pasteur”, this institute was founded through the energy of Prince Damrong Rajanubharb, one of whose daughters had died of rabies at a time when his country did not yet possess the necessary prophylactic means of treating this disease. Then working under the Ministry of the Interior, this institute was inaugurated in April 1913 by King Vajiravudh, and in 1917 was transferred by royal decree to the Thai Red Cross, which was founded by Queen Saovabha. During this period it was already concentrating its efforts on treatment to be applied in cases of dogbites, on anti-smallpox vaccines, etc.

Continuing to enjoy special Royal favour, this institute was able to expand its services and was to become a scientific section of the Red Cross of great importance. In fact, King Vajiravudh, in memory of his mother who had died in October 1919, made a gift of 250,000 tickals for the construction of a building to house the services of a scientific institute on the model of the Pasteur Institute; the inauguration of this new building took place in December 1922, which was named after the foundress of the Red Cross. The

services which were already in existence were transferred there and the institute became the Scientific Section of the Thai Red Cross. Great activity was called for in order to meet the numerous needs of the population from the prophylactic point of view.

First of all, in 1925, a "serpentarium" was established in which was placed a reserve of the poisonous snakes of the country for the purpose of extracting the required amount of venom for the production of antivenene serum. "The Snake Farm" is the name which the inhabitants of Thailand have given this installation, details of which are included in the article below and for which we are greatly obliged to the Thai Red Cross.

At that time the activities of the Institute were divided into three services: human microbiology, veterinary microbiology and general microbiology, the last-named consisting of a school of microbiology and research work. Later, and with the object of ensuring greater efficiency, alterations took place which tended to concentrate efforts on humans. If this limited the field of action to some extent, there was considerable development, on the other hand, in the means of acting.

Activity was slowed down during the Second World War on account of a lack of equipment and instruments in the country. After the war, however, everything was put in motion not only to resume the work from where it had been left, but also to give the driving force necessary to enable the Institute to establish contact outside the country and to be informed of current scientific advances in microbiology. With this object all the doctors occupying key-positions were sent abroad to study on the spot the progress which had been made in this sphere during the years of enforced isolation. From 1946 to 1954, seven doctors worked in various countries and then returned to Thailand enriched by much precious scientific knowledge. On their return, six of these were appointed Heads of the following services: administrative, vaccination, sera, research, transfusion and B.C.G. These services at present ensure the running of the scientific section of the Thai Red Cross.

The administrative Service consists of three branches: Secretariat, stores and dispensary; the "stores" branch being responsible for non-medical equipment, whilst the "dispensary" branch occupies itself with all medical equipment.

The vaccines service produces three types of vaccine of various origins and gives free treatment in cases of dogbites, as well as preventive inoculation against certain infections, diseases and epidemics—smallpox, typhoid, diphtheria, cholera. A statistical table showing anti-rabic treatment gives ample proof of the way in which the tasks of the service have increased : in 1956, 6,723 cases were treated compared with 1,022 in 1929.

Near the “ serpentarium ”, the Institute has also established its own horse stables, which enable it to continue independently the production of certain other sera.

In conclusion, it should be mentioned that treatment for bites is carried out, through the Institute, at five hospitals in the suburbs of Bangkok. The interval between the bite and the application of treatment is thus considerably reduced, thereby correspondingly increasing the number of cures.

The Institute also supplies antivenin serum to the Ministry of Health, which arranges for its storage and distribution to 700 dispensaries of the country.

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A special duty of the Thai Red Cross Society

Like most National Red Cross Societies the Thai Red Cross Society has the Relief and Health Division, Junior and Voluntary Aid Divisions. It was the decision of H. M. King Vajiravudh to add a scientific division to work under the Thai Red Cross. This Division was created as Pasteur Institute in 1913 working under the Ministry of Interior. Its main duty was to produce antirabic and anti-smallpox vaccines. In 1917 it was transferred to work under the Thai Red Cross Society and in 1922 a big and beautiful building was donated by H. M. King Vajiravudh to serve as the laboratories and administration building of the Division “ The Queen Saovabha Memorial Institute ”.

Before the Second World War this Institute was responsible for the production of all biological products required in the country and

had close relation with the Health Section of the League of Nations. This relation has the effect on the responsibility of producing standardized biological products. When the Second World War was over the United Nations and their specialized agencies came into existence. The Science Division of the Thai Red Cross is in close correlation with the World Health Organization in the work of common interests.

At present the Science Division produces the following vaccines and sera :

Vaccines	}	Bacterial	{	Cholera
				Typhoid
				BCG
				Autogenous
		Viral	{	Smallpox
				Rabies
		Toxoid	{	Diphtheria
				Tetanus
Sera	}	Antivenin	}	Cobra
				King cobra
Russell's viper				
Banded krait				
Agkistrodon rhodostoma				
				Polyvalent
		Antitoxin	{	Diphtheria

Distilled Water
 Normal Saline
 Glucose Solution

Most of these sera and vaccines are produced likewise in many countries but the main feature which is different from other institutions is the production of five specific antivenin sera and polyvalent antivenin serum :

- 1 Cobra (*Naja tripudians*)
- 2 King cobra (*Naja bungarus*)

- 3 Banded krait (*Bungarus fasciatus*)
- 4 Russell's viper (*Vipera russelli*)
- 5 *Agkistrodon rhodostoma*
- 6 Polyvalent antivenin serum (Cobra and Russell's viper)

In 1923 a snake farm was built on the premises of the Science Division in order to keep deadly poisonous snakes for extracting the venom to be used in the production of antivenin sera. There are over 30 different kinds of poisonous snakes in Thailand but only 5 are deadly. The Institute buys and keeps these five kinds of poisonous snakes through the year and buys any living snake at sight. During the months of August through November the inmates of Snake Farm will be raised to one thousand. In introducing the scheme of buying any living snake at sight the farmers are encouraged to bring in large quantities of dangerous reptiles, thus reducing their number at large. The Snake Farm is open to the public every day ; on Mondays there is a demonstration how to feed the snakes ; on Thursdays a demonstration on extraction of venom is given to the public.

These performances always draw big crowds which include local people and tourists. Educational bodies also send groups to visit the serpentarium to get some ideas about dangerous snakes and pamphlets which deal with first aid and treatment of snake-bites are distributed to them. The antivenin sera produced at the Institute are used in the country and also being sent to neighbouring countries where they have the same fauna of snakes. Other countries where they keep our snakes in the zoos required a nominal quantity of our antivenin sera. Apart from preparing antivenin sera the Science Division is also doing research work on snake venoms and antivenin sera.
