

See the section **FIGHTING TYPHUS AT GEVGELIA**

PART III: THE AMERICAN RED CROSS IN SERVIA

DR. RYAN UNDER FIRE AT BELGRADE

The young American volunteers in the trenches held no monopoly of the quality of high courage in the face of great danger. The surgeons and nurses of the American Red Cross possessed this trait also. They had occasion to show it in Servia when, at the outbreak of the war, the Austrians fell upon that unfortunate little country, which sent out a cry for help that the American Red Cross was quick to answer. Early in September, 1914, the first of three Servian units sailed from New York and, reaching Greece, went direct to Belgrade. The surgeon in charge was Dr. Edward W. Ryan, of Scranton, a graduate of the Fordham University Medical School and a man of wide experience in administrative as well as in hospital work. Dr. Ryan's two assistants, also graduates of the same medical school, were Dr. James C. Donovan and Dr. William P. Ahern. They were accompanied by twelve trained nurses and carried abundant hospital supplies.

Under date of October 20, four days after the arrival of the unit in Belgrade, Dr. Ryan wrote to the Red Cross headquarters in Washington as follows of the conditions as he found them:

We arrived at this place on October 16 and were immediately put in charge of the big hospital here. Since starting we have had no time for anything but work and sleep. Many of the wounded had not been dressed for several days, and as we have about 150 and it is necessary to dress them every day, it is 11 o'clock before we get through and some nights later.... The cases turned over to us are in many instances of long standing and require constant attention. New cases are arriving steadily and we will be overrun in a very short time. Surgeons are scarce here, and as we have about 50,000 wounded scattered about the country, you can readily see what the conditions are.

Belgrade contained about 120,000 inhabitants. In the early months of the war the city,, which lies on the south bank of the Danube, changed hands several times before the Servians evacuated it finally, being subjected to three bombardments. The military hospital, of which Dr. Ryan took charge on his arrival, was on a high hill overlooking the city and was frequently under fire.

The following weeks were full of exciting experiences for the American surgeons and their nurses. In a letter written from Nish, under date of December 26, and published in the Red Cross Magazine, Dr. Ryan described what had occurred. Since November 25, he said, he had had under his care in Belgrade five hospitals with about forty buildings, being assisted by about nine Servian doctors and one hundred and fifty nurses, and having about one thousand two hundred patients. He was also in charge of the insane hospital and the civil, surgical, and medical hospitals in the city. He continued:

When the Servians evacuated Belgrade they turned everything over to me. When you think that they came to me at 2 o'clock in the morning and said they were all going away and I was supposed to remain and take charge of all the hospitals, you can imagine my feelings. I did the best I could for and with them. When the Austrians came in, the non-combatant Servians all came to me for food. I had to get bread for about 6,000 poor people every day, some of which I bought, but the greater part of which was given to me by the Austrians.

When the Servian troops left they took with them about 200 of our patients, leaving 100 behind. Five days after the Austrians arrived I had 8,000 patients, all very seriously wounded and many with frozen hands and feet that necessitated amputation. Many of them had been on the road six or seven days before we got them, and many did not even have the first dressing.

Before the Servians retook Belgrade 6,000 wounded passed through my hands. As it was impossible to handle them, I told the Austrians they would have to send them into the interior of Hungary, which they

did. When they left they took with them all of their wounded with the exception of 514 which I still have.

In addition to these men, Dr. Ryan had in his care when he wrote about 250 Servian wounded. "The Servians," he added, "are very grateful, and when you remember that they have about 60,000 wounded of their own, every little helps."

FIGHTING TYPHUS AT GEVGELIA

In view of the conditions in Servia two more units of the American Red Cross were despatched the middle of November to the assistance of Dr. Ryan. They were under the charge of Dr. Ethan Flagg Butler and of Dr. Ernest P. Magruder, both of Washington, D. C., Dr. Butler having general control of the force. Assisting them were Drs. James F. Donnelly, of Brooklyn, Clapham P. King, of Annapolis, and Morton P. Lane, of New Orleans, with twelve trained nurses. As the Servian Government had established itself at Nish, it was decided that these two new surgical units should make their headquarters at Gevgelia, a town of about 7,000 inhabitants on the railway running south from Nish to Saloniki on the Greek coast.

Dr. Butler and his staff reached Gevgelia in December, and found themselves face to face with a difficult situation. The following extract from a private letter from Dr. Butler, dated Christmas day, which was published in the Princeton Alumni Weekly---Dr. Butler was graduated at Princeton in 1906---defined the situation:

Now we have on our hands some thousand or so wounded, both Servian and Austrian, in a large tobacco factory. There is no need to say more than that Sherman must just have come from a military hospital when he uttered his trite description of war. We are, however, taking over an old storage house wherein there have been no patients and which, therefore, comes into our hands sweet and clean. In this we hope to establish a couple of operating rooms, and ward space for 175 patients, choosing for this building the more severely wounded.

The greatest need that confronted Dr. Butler was for an abundant supply of pure water. Even the surgeons and nurses were under the necessity of making "an occasional run for a hot bath and a glass of water" to Saloniki, a morning's ride on the railway-train. At this time no infectious or contagious disease had made its appearance, but Dr. Butler saw clearly that the conditions were such as to breed a veritable pestilence. In a second letter he wrote:

Yet we are going to stick to the game and beat them in spite of themselves. We will just hammer, hammer at the local authorities and at the Government in Nish, until they let us make a clean place of this and keep it clean.

Not many weeks passed after this before the situation became desperate, owing to the outbreak and rapid spread of the dreaded typhus and typhoid fevers in and around Gevgelia, where the sanitary conditions were about as bad as they could be. The pestilence attacked the members of the two American units. Dr. Butler himself was the only one of the American surgeons who escaped an attack, more or less severe, of typhus, and at one time no fewer than nine of his twelve nurses were typhus patients at Gevgelia. Although he was authorized by cable to transfer his entire staff to Saloniki, Dr. Butler stuck resolutely and courageously to his post in Gevgelia, and, with four of his party in the delirium that accompanies typhus, could write in this admirably restrained temper to the home office of the American Red Cross:

In regard to the present personnel of the units, I do not advise withdrawal or even change of location within Servia, but I feel that before other members are sent to this country your office should weigh seriously the risks that everyone will have to run---risks from disease that are considered rightfully preventable in our home country---and decide whether or not the units are to be kept up to their full quota or allowed to gradually decrease in number as one after another the original members become sick and are invalided home. I am sure, from the events of the past two weeks, that it is only a question of time

before each member contracts some sickness of sufficient gravity to make his or her return to America necessary.

Two of the American surgeons succumbed to the disease. Dr. Donnelly died on February 22, and Dr. Magruder, who had been transferred to Belgrade to assist Dr. Ryan, died early in April. It was the privilege of Sir Thomas Lipton, who saw Dr. Donnelly when he was ill, to carry out his last wishes. One of these was that if he did not pull through he should be buried with the American and Red Cross flags wrapped around his body. A recent financial report of the American Red Cross records a substantial sum as set aside for pensions to the widows of these two surgeons who gave their lives to the cause of humanity.

Meanwhile help was being sent to Dr. Butler by the American Red Cross. In response to a call for volunteers Dr. Reynold M. Kirby-Smith, of Sewanee, Tennessee, and three nurses left their station at Pau, France, and hastened to Gevgelia. In February Dr. Earl B. Downer, of Lansing, Michigan, left the United States, also under Red Cross auspices, to go to the aid of Dr. Butler, and in March more trained nurses were despatched on the same mission. Typhus, however, had become too virulent and too widespread to be combated successfully by so small a force, and steps were at once taken to organize and to send to Servia a sanitary commission for the express purpose of stamping out the plague from which thousands had already died.

Dr. Kirby-Smith, Dr. Butler, and Dr. Downer, leaving Gevgelia to be taken care of by the Sanitary Commission, went to Belgrade to the assistance of Dr. Ryan, who meanwhile had fallen ill with typhus. Summarizing later the work of the American Red Cross in Belgrade, Dr. Downer stated that in little over a year 20,000 sick and wounded, including all nationalities, had been cared for. "During the recent German invasion," he said, "we cared for 4,000 wounded in a period of thirty days." Describing the daily routine of himself and Dr. Butler, he said:

In the month of April Dr. Ethan F. Butler and myself did all the surgical and medical work of the hospital. We operated each day from 8 A. M. to 2 P. M., and after that visited 800 patients. This was our daily routine. Each day we made a rigid search of the wards for new typhus cases, which were promptly sent to the isolation hospital. At this time most of our nurses and doctors, including the director, Dr. Ryan, were ill from typhus. Dr. Reynold M. Kirby-Smith, who was in charge at this time, took care of the executive work of the hospital.

With the Servians Dr. Ryan had become a popular hero. To him they gave the credit for saving the city of Belgrade from being pillaged and burned by the Austrian troops. The London Times confirmed this view, saying that it was due to his "fearless, determined intervention that the city was not destroyed and that an even greater number of women and children were not carried off into captivity." He kept on good terms, moreover, with the invaders, who sent him no fewer than 8,000 wounded soldiers in one day for treatment !

CONQUERING THE PLAGUE OF TYPHUS

The story of how the plague of typhus in Servia was conquered by American scientific knowledge, organization, and energy, the cost of practically the whole undertaking being met by American money, forms one of the most dramatic chapters in the history of modern sanitary science. The disease became epidemic in January, 1915, in the northwestern part of Servia among the Austrian prisoners of war, who were greatly crowded together and who were compelled to live under the most insanitary conditions. As these prisoners were sent and as infected native Servians travelled to other parts of the country, the disease spread rapidly, reaching its height in April, when no fewer than nine thousand new cases a day were reported.

In this emergency the American Red Cross organized a sanitary commission, for the leadership of which Dr. Richard P. Strong, professor of tropical diseases in the Medical School of Harvard University, was

selected. Dr. Strong, who was a graduate of Yale of the class of 1893, had proved, in the Philippines and in Manchuria, his capacity for just this sort of work. The commission was financed by contributions from the Rockefeller Foundation, the American Red Cross, and private sources, chiefly at Harvard and at Yale. The membership consisted of twelve physicians and sanitary experts, who sailed for Naples early in April, Dr. Strong having preceded them by several weeks.

Doctor Richard P. Strong

All sorts of supplies were taken, one item in the list being fifty-four tons of sulphur for disinfecting purposes. Later, in May, in response to appeals from Dr. Strong for more assistance, a supplementary force of twenty-five sanitary experts under Dr. Edward Stuart, of Oklahoma, was despatched to Servia, and by July the total American membership of the commission had been increased to forty-three. A great mass of additional supplies was also forwarded, including 125 tons of sulphur and fifteen tons of artesian-well apparatus.

England, France, and Russia were as keenly alive as was America to the danger to all Europe which lay in the dreaded typhus epidemic and had sent sanitary experts and physicians to Servia. Reaching Nish, Dr. Strong, with the co-operation of the medical men from these countries and of such Servian doctors---more than a hundred native physicians succumbed to the disease before it was conquered---as could be spared for the work, organized an International Health Board, of which he became the medical director. With full authority from the Servian Government to take any measures necessary to stamp out the plague, Dr. Strong divided the country for sanitary purposes into fourteen districts. The French, English, and Russian physicians took charge of seven of these districts; the Americans the remainder.

The methods that modern sanitary science employs when it becomes necessary to save not a community but a whole people from the ravages of a pestilence, are well illustrated by Dr. Strong's report to the American Red Cross:

As typhus is conveyed from man to man by vermin (the bite of the body louse) the bathing and disinfection of very large numbers of people and immediate disinfection of their clothing in a short period of time was an important problem in combating the disease. For this purpose sanitary trains consisting each of three converted railroad cars were fitted up. One car contained a huge boiler which supplied the steam for disinfection of the clothing. In a second car fifteen shower baths were constructed. A third car was converted into a huge autoclave (disinfector), into which steam could be turned under automatic pressure. In this manner the vermin were immediately destroyed and the clothes thoroughly disinfected.

Large tents were erected beside the railroad sidings on which the cars were placed. The people were marched by the thousands to these tents, their hair was clipped, and a limited number undressed themselves, carried their clothes to the disinfecting car, and then passed to the car containing the shower baths. After a thorough scrubbing with soap and water they were sprayed with petroleum as an extra precaution for destroying the vermin. They then received their disinfected clothing. In many instances in which the clothing was very badly soiled fresh clothing was supplied. Many of these people stated that they had not bathed for ten months or longer. Their faces in some instances betrayed surprise and in others fear when the water touched their bodies.

In the larger cities and in those situated away from the railway, disinfecting and bathing plants were established and separate hours were arranged for bathing women and men in large numbers.

In many towns the clothes were disinfected by baking them in ovens, either specially constructed for this purpose or those which had been built previously for the baking of bricks or for other purposes. As all the hospitals were infected, it was necessary to systematically disinfect these and the inmates.

As cholera threatened to develop, vaccination against cholera and typhoid fever was made compulsory in Servia, and vaccination trains and parties travelled all over the country for this purpose. Dr. Strong's activity during this campaign was prodigious. Here is a letter in which he describes his experiences one night late in May, while returning, with several companions and a guard, from a visit by horseback and

carriage to a hospital in Pech, in Montenegro, the carriages having been sent on ahead of the party:

I forgot to mention that I had an escort of six gendarmes with me because we were passing through a territory which is on the Albanian border, and the Albanians are very unfriendly to the Montenegrins. The gendarme in command begged me not to camp in the open, saying it was very dangerous to do so. However, as I had not slept for twenty-eight hours, I did not feel like going on at that hour of the night and spending it at an infected hotel. We therefore insisted on remaining that night in the open. A camp-fire was started and Mr. Brink made some coffee and fried some bacon. This we ate, together with a tin of salmon and some biscuits.

Our meal had hardly been finished before a curious incident happened. A man, screaming with all his lung-power, came running into our vicinity, chased by an Albanian with a rifle in his hands. This man claimed, as we found out later, that the Albanian was trying to kill him. It seems the Albanian had seen our camp fire and had crossed the border to find out what it meant. We gave him something to eat and he at once became very friendly. By signs he intimated to us we should put the camp fire out and lie down and go to sleep. In fact he several times tried to put the fire out himself, and kept pointing to the Albanian frontier, every once in a while raising his rifle as if about to fire, indicating, we presumed, that we were in danger.

As the rain was now pouring down we decided to go to bed. We had no tents with us, but had the canvas covers for our hammocks. We spread our bedding on the ground and then climbed under the canvas. The rain fell heavily all night long. I was wet through, and found next morning that my pocketbook had been so badly soaked that my passport which it contained was damaged and that the pigment on the red seal had smeared on the paper. We heard some shooting in the night, but no shots were exchanged. A little before 4 A. M. we crawled out of our beds. It was still raining. We rolled up the water-soaked bedding and left it there on the plain to be sent for and started on our walk to the town of Djakovitza, which we reached about 5.45 o'clock. The commanding officer in the town was scandalized to hear that we had camped in the open on the Albanian border. He said it not only was very unsafe but that no one had done such a thing for many years; that our experience would go down in history. We, however, preferred to take the risk of being shot to sleeping in a typhus-infected hotel.

The battle lasted fully six months before the scourge was finally conquered. Dr. Strong's estimate was that from 135,000 to 150,000 persons died in Servia from the disease. In the end science won. On his return to the United States in the autumn Dr. Strong announced that in the last three weeks of his stay in Servia not a single new case of typhus had been reported.