

# My Student Elective

## Problems in Peru

P W R WOODRUFF

My first aim on this elective was to obtain experience of medicine and society in a country greatly different from Britain. My second aim was to collect specimens of soil and blood and compare the prevalence of toxocarasis in the local population with the reservoir of infection in the soil. I will not describe the results of my study in detail, but I can say, although the



detailed results are still being evaluated, that the prevalence of toxocaral antibodies is higher in Peru than that recorded anywhere else in the world.

Soon after arriving I began to realise the enormous problems facing Peru. Of the population of 13.5 million, one-third live in Lima, and half of these live in slums. The slums, which are an increasing health problem, are built from rubbish piled along the banks of the River Rimac, and increase by many thousands a year as the Indians (over half of Peru's population) move from the countryside to the city searching

for employment. Lima has grown from one million in 1950 to 4.5 million today—largely because of this immigration. Although Lima is one of the few places in Peru where water may be drunk with some safety, in the slums water supplies infected with typhoid are common.

My first job was working in a health clinic in the poor area of Mirones Bajo. The rubbish from the market was left by the entrance to the clinic, and attracted dogs and children to rummage for edible scraps. This common sight interested me because of my toxocarasis study. Only the dentist was working on my first morning, so I was shown the single treatment practised for dental caries—extraction. My second and last day at the clinic was curtailed by a nationwide strike of health service ancillary workers.

Next I went to a university clinic in a hillside slum called Tohuantinsuyo, which ironically is an Indian word meaning "the four corners of the world," and was used by the Incas to describe their once large, proud empire. I went by van up the dusty, potholed track to the new clinic, which stood among

rubbish and semi-decayed houses. Here I was told that taking finger-prick blood samples for my study would upset the patients, so I decided to collect soil from the backstreets. I had never seen so many dogs—perhaps 20 in a small street. Despite an intensive antirabies campaign, there are several cases every year from such places in Lima. Apart from the dogs, my second preoccupation was avoiding being mugged, a common experience in these impoverished districts. It is a sobering fact that 70% of the children from these areas die before reaching 2 years of age.

The next day I managed to see the director of the clinic, an Irish lady, who told me that I would need the blessing of a community committee before attempting any research and it was unlikely to give it—if and when it next met. There was a general strike the next day, and I was advised to stay indoors because of rioting. Peru under the military dictatorship of General Morales Bermúdez was in political and economic difficulty. The Government is being forced to hold elections next year, but meanwhile strikes and disruptions continue.

For the next few weeks I worked in the Rimac Hospital emergency clinic. I sometimes had difficulty distinguishing the patients from the crowd of relatives who would fill the corridors. On occasions, I would explain in Spanish that I was going to take a blood sample, turn to pick up the needle, and turn back to find the patient disappearing into the scrum—never to be seen again. Not all the patients, however, were so mobile. One, an old man, thin and caked in dirt, was dragged along the corridor and left a trail of pungent, watery diarrhoea exuding from his trousers. He was one of the many patients with typhoid from Tohuantinsuyo.

From Lima I went to Santiago de Chuco, a small town 2500 m high in the northern Andes, in a bus crammed with people, sheep, and luggage. We climbed and twisted into the rocky Andes; many passengers vomited from the combined effects of motion and the altitude, which reached 4500 m. The town was Indian, quaint, and sleepy, but the 20-bed hospital was modern, having been built with a donation from Cuba in 1971. The combination of the strike and Independence week meant that there were far fewer patients than normal. It also meant that when patients did arrive they were very ill: one patient with heart failure was so oedematous that he could hardly move to kill the bugs that crawled over his body. Victims of violence, including several prisoners from the jail, were a reminder that the festivities were not all music and dance. From a town of festivity I arrived at a city of mourning. Haya de la Torre, the great APRA party leader, had died and was being buried in Trujillo, his birthplace. From seeing the multitudes at the funeral procession, I sensed some of the feelings that inspire the graffiti that are daubed over Peruvian cities.

After returning to Lima I travelled east to Huanuco. The 400-km journey went from sea level to 5000 m, through Oroya, whose name denotes the deadly fever of the Andes, and over the plains of Junin—also associated with a disease, Junin fever—to the cool, cactus-covered valley of Huanuco at 2000 m. The major diseases I saw among the children there were either respiratory or intestinal: bronchopneumonia, bronchitis,

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whooping cough, pulmonary tuberculosis, typhoid, and gastroenteritis. The adult diseases were more varied, including occasional cases of blastomycosis; typhoid and tuberculosis were common. Most illness, especially in children, presented against a background of anaemia, malnutrition, and parasitosis. Haemoglobin concentrations below 2.5 g/dl and eosinophilias above 50% were common in cases of severe multiple infections—particularly in patients seen as I moved into the jungle.

I travelled to Tingo Maria, 700 m above sea level in hot, humid, densely forested hills, a moderately sized town, which thrives on the cultivation of coca, from which cocaine is extracted. Here 10 out of 40 patients were specifically diagnosed as having symptoms caused by parasites. In the surgical wards 70-80% of the patients were there because of road traffic accidents. Histoplasmosis occurs in some who visit the one tourist attraction in Tingo Maria—the impressive “Cave of the Owls.” Its entrance is at least 30 m high among densely forested hills and is covered in creepers. The notice by the entrance warns one not to go in more than 500 m because of venomous spiders, snakes, scorpions, and vampire bats. The noise of the insects and the screeching of owls flying among the shadows of the stalactites are deafening. As I walked I realised the ground was alive with insects, which made the floor look as though it was moving.

After travelling another 300 km into the jungle I reached Pucallpa. The most remarkable difference between the range of disease here and that elsewhere is the presence of leprosy. The patients I saw were severely malnourished, and many had consulted the doctor only when they were too deformed to work.

The doctors in all these rural areas had to rely for diagnosis almost entirely on their clinical ability. Only 5-10% of patients had blood samples taken for analysis, either because they objected to blood sampling or could not afford investigations. All except the very poor had to pay for any treatment or investigation.

My next destination was Iquitos on the Amazon 1000 km to the north. This journey had to be along the slow-running, muddy waters of the Ucayali and Amazon rivers for there are no roads in that jungle. The river trip was supposed to take four days, but engine failures and a broken rudder extended this to two weeks. As soon as the sun set we would moor by the river bank. Clouds of insects then surrounded us, and to avoid their bites we had to put on an extra layer of clothing. I then spent the night lying on cement bags, soaked in sweat and waiting for dawn, when the plague of biting mosquitoes gave way to one of biting beetles. Our unvarying diet was boiled green bananas and fish. As soon as the boat's engines were started in the morning, fish from the shoals around jumped aboard and provided the day's supply. It was a shock to see the seemingly vast city of Iquitos after two weeks on the water with nothing but surrounding jungle. The contrast between development and primitive existence in the city was considerable. On an island in a sea of jungle 4000 km from, but only 100 m above, the ocean, Iquitos is nevertheless both a port for ocean liners and the home of Indians living as they have done for centuries.

I gained four main impressions from my 2½ months in Peru. Firstly, I saw a land abounding in problems caused by population pressures in towns and poor hygiene almost everywhere. Secondly, I was impressed by the immensely rich variety of social, natural, climatic, and physical conditions. Thirdly, I saw a large range of diseases, mostly infective and as varied as the climatic and physical conditions. Fourthly, and most importantly, I was impressed by a people and a medical profession, warm at heart and struggling bravely against innumerable difficulties. The doctors command great respect and engender in those who work among them deeply felt wishes to return to help both them and the people they serve.

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## *Reading for Pleasure*

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### **Anything but science**

M H LADER

As with many products of the postwar grammar school treadmills, I was required to specialise in science at the age of 11 and to concentrate on it three years later. Since then I have tried to correct the balance of my education by reading widely for pleasure—any topic except science.

My pleasure doubles when I read a book that is excellent literature and is also manufactured to the highest standards with good quality paper and imaginative bindings. What is more pleasing than a book with paper sufficiently opaque that one reads one page at a time, with a binding so supple that it remains open instead of mimicking a Venus fly-trap, with a bold, legible typeface, and with that distinct smell of fresh bookbinder's glue

and printer's ink? If specially commissioned illustrations or elegant new translations are added, one is describing the remarkable publications of the Folio Society. The range is wide—literature, travel, the classics, history, memoirs—and the choice eclectic.

#### **A satisfactory membership**

Intrigued by the descriptions of the forthcoming year's offerings (for one must buy at least four volumes a year, in advance), I have ordered books that I would normally have considered of little interest. And I have rarely been disappointed. In my 15 years or so of membership, I have stormed Quebec with Wolfe, braved the prairie Indians with Parkman, been sickened at Cortez's treatment of the Aztecs, seen the rivers of blood at the sack of Jerusalem in AD 70, been revolted

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