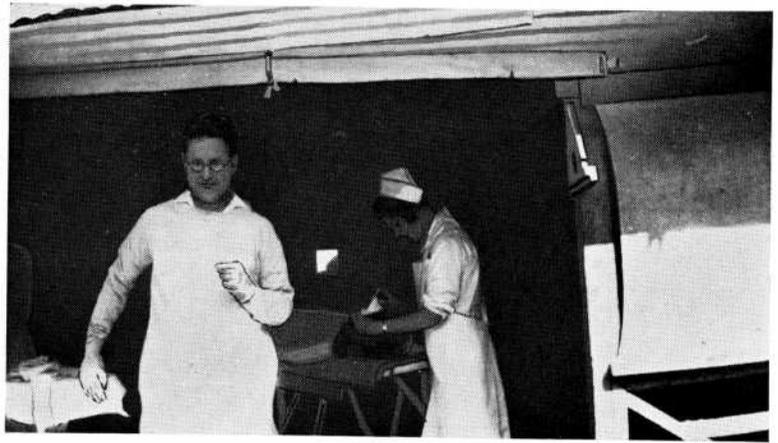


This photograph shows the crude conditions under which a Sooner graduate has been doing medical missionary work in Ethiopia. An operation is being performed on a patient on the clinic veranda.



Medical adventures in Ethiopia

MY experiences as a medical missionary in western Ethiopia have been so varied and at times so exciting that it is difficult to choose between travel, medical work, big game hunting and other possible topics for this article.

But first I wish to make it plain that I was not expelled from Ethiopia as has been erroneously stated. I left my station at Gore in the western part of the country when it seemed to me that the local authorities would not be able to keep law and order much longer, though they were urging me to stay and assuring me that if I were killed they would die with me.

But most of my friends were urging me to leave, my furlough was already eight months overdue, and the only dependable chief was leaving. It was quite a while later that Italian troops arrived in Gore.

Travel during the dry season is always interesting, especially over roads one has never traveled before, and at times it has all the elements of adventure, including danger. During the rainy season it is just as much of an experience or an adventure, but usually it is not so pleasant.

Here you are loathe to leave the pavement when it rains; there we had no pavement to leave. Here, when your car does get stuck in the mud, you get someone to pull you out; there when our mules or horses get stuck belly-deep in mud we get off and struggle out while the animal does the same.

And if one is caught on the road in one of Ethiopia's torrential tropical rains it is definitely unpleasant—a raincoat makes one uncomfortably warm, and the slippery roads not only slow one's progress but cause the four feet of one's steed to go in four different directions at the same time, the trails being mere paths which are usually going up or down but seldom on the level except through swamps or

By
Dr. V. F. Dougherty '22

bogs. And in such places they are deeply corrugated, which makes travel miserable. Camp sites during the rains are either wet or muddy, and often both, as well as on a slope which keeps one crawling up in bed all night.

As long as I live I will remember my first big elephantiasis operation. I had been charging a dollar and a half for operations of this sort, but this patient looked more prosperous than the others and so I charged him two and a half, but I became suspicious when he thanked me for making the fee so low.

Later I found that he was not only a witch doctor but also a chief of no mean rank, and withal quite rich.

The operation was a nightmare. I had been doing these operations under local anaesthesia and made the usual injections in this case. But it brought no appreciable diminution of sensation. A second time I went around the entire field with the same result. A third, a fourth and a fifth time I repeated the injection but always the result was the same. Finally I called a colleague who was superintending the construction of a building nearby and had him administer chloroform.

It took an abnormally large amount of the drug to anaesthetize the patient and when he was ready for operation I soon found he was dangerously deep in the anaesthetic state. When the mask was removed he seemed to come directly from the danger zone up to where he was kicking and yelling. The tumor which I was attempting to remove was a huge one—I had never seen one in this country or in London while in school there and the tissues were all so abnormal that I had to

work very slowly and carefully to avoid cutting into some vital structure.

I began about seven in the morning and finished about one in the afternoon. If that old man had died I think I never would have done any more surgery. But he had an amazing vitality and not long after he was jumping and dancing like a boy—happy to have been relieved of such a weight. And I went on with surgery.

When this witch doctor returned to his home about a week's journey away, the people whom he had been deceiving and robbing all the years were so glad to see the old rascal back again that they gave him a thousand dollars—not counting the small coins, the chickens and other gifts.

A doctor's work in Ethiopia is much different from what it is in our own country. To begin with a doctor must be something of a pharmacist and conditions in western Ethiopia made it almost mandatory to lay in a year's supply at a time.

Some diseases which are fairly common here are not seen there at all; and the reverse is also true. Oriental sore and relapsing fever are not uncommon there, and malaria and amoebic dysentery are more common than in this portion of our own country. Worm infestations seem to be practically universal among the Ethiopians. But acute abdominal conditions are comparatively rare.

Especially in medical practice there is still a great deal to be done to win the confidence of the natives. Surgery is more dramatic and seems to be more readily comprehended by the natives, but most surgical cases are from three to seven years old when they finally come for treatment.

The native puts a great deal of faith in the native witches (witch doctors), who are usually men, and a recent patient of mine had spent \$125 for sacrifices and

gifts to the witch in his district before he came to the mission where the operation he needed cost him \$5.

There are also native doctors who have a rather large empirical knowledge of various roots and herbs, and these are often tried also before consulting the foreign doctor. And some remedies are known to everyone.

Thus far I have had to do all operations on the veranda of the clinic, the clinic being a room about fifteen feet square with two doors and one window. It serves as office, dispensary and examination room, and into it have come thousands of interesting people.

With as many as eight or nine thousand patients a year I had practically no time to record information and observations, but a few people stay in my memory. One man whom I vividly remember was a surgical patient. After making the usual pre-operative anaesthetic injections I pricked him with a needle and asked him if it hurt. He replied in the affirmative so I repeated the injection two or three times but after that, having no one to administer a general anaesthetic, I told him it would be impossible for me to operate on him, and I went on about my clinic work.

When I had finished clinic and was going home for lunch, this man followed me, begging me to operate on him. I explained that I couldn't operate if the anaesthetic didn't put the part to sleep, so that it wouldn't hurt. You can imagine my feelings when he told me that it hadn't hurt him.

"Then why," I demanded, "did you say it hurt?"

"Oh, I thought that was what you wanted me to say," was the unexpected answer. "If you will only operate on me tomorrow," he begged, "I'll not say a word." Finally I consented and true to his promise he didn't utter a syllable, even in answer to questions as to whether it hurt or not, until the operation was all over.

But not all my medical work has been confined to our tiny clinic. Of the various medical trips I have made the one to Dejazmatch Tayei stands out most prominently in my memory. He was the governor of the province adjoining us on the south. His soldiers, I knew from a former visit, were some of the most reckless and daring men to be found in Ethiopia. They were also very loyal to him; and they were even more suspicious and superstitious than the usual Ethiopian.

The Dejazmatch had been ill for a long time; he had lost a lot of weight; and his resistance was very poor. All this I knew before I started out, and knowing it I realized that should Dejazmatch die while under my care, even though through no fault of mine, I would be blamed and

MR. and Mrs. V. F. Dougherty are a Sooner couple with an unusual record of missionary service. Mrs. Dougherty attended the University in 1916-17 as Dotie Irene Kernodle, taking a fine arts course. Dr. Dougherty received his medical degree in 1922.

They were married in September, 1918, while he was still in the army. After he completed his medical work and internship, they and their four children started to Ethiopia in September, 1925, stopping five months in London where he took special studies in the School of Medicine and Hygiene, a unit of London University.

They now have six children—two boys and four girls—and recently have been visiting relatives in Oklahoma City while on furlough. The education of the children is their greatest problem, and they believe this is the point at which the greatest sacrifice is demanded of missionaries.

in all probability shot. When still a day's journey from my patient I heard that a doctor who had been sent from Addis Ababa a month before had spent only one night with the governor, had given him some medicine, and had returned forthwith to the capital. The medicine did not do the patient any good, however, because he didn't take it.

All the Dejazmatch's followers thought that this doctor had been sent to poison their master whose claim to the throne would take precedence to that of Haile Selassie if based on lineage alone, and I knew that they were suspicious of me also. This only added to my certainty as to the kind of situation into which I was going.

But the Dejazmatch put his trust in me—he had, in fact, steadfastly refused to have anyone else—and fortunately for me he wasn't too weak to support the treatment. It took a month to get him far enough along the road to recovery that he would consent to my leaving him. During this time I soon finished the books I had taken along, and I passed interminable hours learning and playing native games. I did a little shooting and spent considerable time in recording native folklore, proverbs, songs and other things of interest.

When I finally left him, Dejazmatch Tayei gave me a gaily caparisoned riding mule. The horn and the cantle of the saddle were covered with red velvet and a richly embroidered saddle cloth was draped over the rest. The bridle and halter were also embroidered and around the mule's neck was a jingling silver necklace!

Returning to Gore I went by way of Kaffa, the province bordering ours on the southeast. Kaffa is thought by many to have given its name to coffee, which is found growing wild in this and many

adjoining provinces. It was powerful and prosperous kingdom until the rising modern Ethiopia overwhelmed it and decimated its population by constant raiding for slaves. The present inhabitants are said to number less than one fortieth of what they did under the old Kaffa kings.

Ethiopia is nominally a Christian country, adhering closely to the forms and ritual of the Coptic church in Egypt, but large sections of the population are Mohammedan and still larger areas are still pagan, while one tribe clings to Judaism. For Ethiopia is not a nation, but a conglomeration of some eighty different tribes speaking around seventy languages and dialects.

When their ears have become opened they learn the stories and teachings of the Bible quite readily and they are able also to make their own applications of Christian truths and ethics to their own lives and problems.

The people living on the Ethiopian plateau are chiefly agriculturalists but they also keep cattle, sheep and goats. It is in their homes that I have had some of my most enjoyable times. And while on hunting trips with them as my carriers and guides I have learned a great deal more of native life, and especially of folklore, than I ever have in performing my medical and other duties in the town.

I have been especially interested in folklore, but space permits only a brief example. According to this story. God one day called all His creatures to Him. The snake obeyed very promptly but man was rather tardy and the other animals still more so. God rewarded the snake for his promptness by giving him immortality and that is why the snake sheds his skin each year and so renews his life.

This story has more point to it when it is explained that these people worship the snake—one black variety in particular. It is thought to have supernatural powers.

The pagans, and most of those who have recently come out of paganism, as well, also worship certain mountains, trees and rivers as well as certain other animate and inanimate objects. And very reluctantly, indeed, do they part with their belief in malign creatures very similar to the werewolves which plagued some of our ancestors not so far in the past. And many marvelous and fanciful tales are told of the activities of these creatures.

It is difficult to realize what a large part in their lives is played by fear. The ordinary peasant, under native rule, lived in fear of the chiefs over him for there were no set taxes in our province and each chief took as much as he could get. He lived in fear of evil spirits which could bring sickness to men and cattle,

(TURN TO PAGE 192, PLEASE)

VIII.

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IN NATURE'S PATH

A good deal of what we call invention is imitation of nature.

The aeroplane is a man-made bird. The submarine is a mechanical fish. The locomotive has been called "The Iron Horse."

So countless objects follow nature's patterns, and in the matter of mechanical principles there is little if anything that we know which wise Old Mother Nature has not always practiced.

What we admire in scientists and engineers is, then, not so much their ability to create things essentially *new*, as their skill in searching out old but hidden principles, and their remarkable ingenuity in applying these principles to new uses.

There are very few more interesting examples of this skill and ingenuity than the modern automobile.

And there are very few more skilful "imitations of nature" than are represented in the many and varied functions performed by the *thousands* of parts that go to make up a modern motor car.

There is the basic function of movement. Hence, wheels, and the gearing of power *into* the wheels.

There is the function of changing *direction* of movement, and that of moving over various surfaces, on level ground, uphill and downhill.

There is the necessary ability to *stop* movement. All these require such devices as steering apparatus, brakes and methods of controlling power and speed.

Then there is the function of carrying passengers, and this involves supplementary functions.

One of them is to provide *comfort* for the passengers... to minimize the *shocks* of travel which would otherwise result.

Now nature, too, has had the problem of producing shockless movement. In the human body, for example, many devices are utilized toward this end.

First, there is the soft padding of the soles of the feet—the cunning arrangement of the foot arches—the manner in which the ankle is constructed. Next, comes that important factor—the structure of the knee. The easing of shock is also served in the fitting of the spine to hip bones, and thence to the legs; in the miraculously efficient spinal column itself with its cushioning pads of cartilage between the vertebrae; in the manner of balancing our heads on our spines; and finally, the muscles and tendons employed as an elaborate system of springs and shock-absorbers.

Now see how automobile construction parallels nature's plan. The "foot-paddings" of our cars are their tires. The counterpart of the foot arches are the springs between axles and frame. The self-adjusting nature of the ankle is imitated in the universal joint. Rubber cushioning serves purposes similar to the cartilage pads between vertebrae. Shock absorbers have restraining effects like those of muscles and tendons.

Only one major item of nature's provisions is omitted from this list... that important structural joint we call the *knee*. And in certain cars, even this is present in the properly-named "Knee-Action."

And so we have a partial glimpse of automobiles as "imitations of nature." Only partial, of course, for cars must "eat," and cars must "breathe." Cars must "speak" the warning of their approach. Cars must "see" where they are going. And stripped down to basic principles, the devices for accomplishing these purposes are surprisingly like the methods of nature itself. The more we succeed in paralleling nature's methods, the better the car—the more efficiently it performs the functions for which we prize it.

In the automobile... as in all matters of mechanics... the job of the engineer is not so much to blaze new trails as to find his way... with the trained eye of the frontier scout... along the paths of nature.

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