



Wellcome Film Project

The Sleep of Death

The Wellcome Trust Film Unit, 1989.

Directed by Anthony Palmer.

Researched, Written & Produced by Dr BI Williams.

Sir Patrick Manson played by Mark Brackenbury.

Dr Louis Sambon played by Robert Ashby.

Dr Castellani played by Ian Harvey.

Colonel Bruce played by Leon Sinden.

Dr Forde played by Alexander John.

Dr Dutton played by Andrew Solomon.

Sir John Kirk – James Green; Major Ronald Ross – Tim Bannerman; Sir Michael Foster – Lee Fox; Dr Moffat – Barry Stearn; Dr Lowe¹ – Tony Aitken; Lady missionary – Lucinda Gane; Mrs Bruce – Catherine Parr; Lady Manson – Jane Lowe; Colonial officer – Ray Armstrong; Dr Baker – Paul Lawrence Davis; Kelly – Malcolm Rogers; Professor Allbut – Bill Shine; Dr Sambon's guest – Cheryl Pay; the Lecturer – High Dickson.

Colour

Duration: 01:02:17:24

00:00:00:00

<Opening credits>

¹ References only have been found for a Dr George Carmichael Low, without the 'e' given in the title credits. George Carmichael Low was active at the London School of Hygiene and Tropical Medicine at the dates given in the dramatisation and was involved in the first Ugandan sleeping sickness expedition. It is most likely that the spelling of the surname in the opening credits is incorrect. However, for the purpose of consistency it has been used with that spelling throughout the transcription.

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<A lecturer explains the history of research into African sleeping sickness, referring to slides, to a room of students>

The disease has a devastating effect, often leaving entire villages empty and deserted for several years. The victims suffer rapid emaciation and weakness which results in death.

The disease is caused by infection with a parasite, the trypanosome. This multiplies rapidly in the blood stream, causing a systemic reaction, and then enters the central nervous system where it produces inflammation of the brain and this of course gives rise to the sleepy episodes characterising the later stages of the disease. Hence, sleeping sickness.

The trypanosomes are transmitted by the bite of the tsetse fly which acquires the parasite by feeding on the blood of a previously infected man or animal. Although the disease has been recognised in West Africa for at least 500 years, it wasn't until the early part of this century that a rapidly occurring sequence of discoveries gave us a clearer understanding of the disease. Until this time it was thought to be limited to the West African native, due to his genetic constitution, alcoholic or sexual excesses, even the eating of contaminated food and so on.

The first of these major discoveries occurred when doctors Forde and Dutton (Dr Forde is on the extreme left and Dr Dutton on the right) when doctors Forde and Dutton established the presence of trypanosomes in the blood of a European suffering from an unusual fever. These trypanosomes were apparently identical with those found several years earlier by David Bruce who had found them in Zululand cattle dying from a mysterious wasting disease called Nagana. However, it wasn't until 1902 that trypanosomes were discovered by Dr Castellani, both in the blood and in the cerebrospinal fluid of patients with sleeping sickness. Their significance as the cause of the disease was soon established and within a year the tsetse fly was proven to be the carrier of the parasite as had been long suspected.

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Now, if Patrick Manson, the founder of this school, had been giving this lecture at the turn of the century, he would have been unaware of any of these facts which we now know. However, in the summer of 1900 Manson and his colleague Louis Sambon had an unexpected adventure. Manson had been consulted by a rather strange [...]

<Intertitle>

The Sleep of Death

London 1900

<Fade out from lecturer and into dramatic reconstruction>

<Sambon and a female are in a drawing room listening to music on a gramophone. As they leave to go out, they are interrupted by a phone call>

Female:

<laughing> Oh do be serious, Louis, that is not the mood[?] of Covent Garden or La Tosca. It's very tragic you know.

Sambon:

<laughing> Ah, beautifully timed and beautifully sung. We must be on our way now.

Sambon:

<picks up ringing phone> Louis Sambon. Patrick! Bon soir! Is everything all right? Nothing serious? Look Patrick, I must suggest, er ... Yes, I have tickets for Puccini's new opera. <puts down the phone and speaks to the female> I'm afraid something unexpected has happened.

<Sambon and Manson in conversation in a small laboratory / study>

Manson:

So, you agree? You're fairly sure about it?

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Sambon:

Yes, but I shall have to see some more slides of course.

Manson:

Yes, that's the problem

Sambon:

Problem? Why can't you take some more slides? Is there something unusual about this animal? Where is it?

Manson:

This animal is a human being.

Sambon:

<turns dramatically> Mon Dieu, Patrick.

Manson:

One of our colonial officers, on leave from the Gold Coast. I saw him this afternoon. He's due to go back to West Africa in a few days and I'm not at all sure where he is.

Sambon:

But what was wrong with him?

Manson:

Oh, recurrent bouts of fever, tiredness, you know, the usual.

Sambon:

Have you no idea as to where he is?

Manson:

He said he was going to spend a couple of nights at his club, intent on doing the town before he sails next week.

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Sambon:

Well have you any idea as to which club?

Manson:

No, he didn't say. He said he'd contact me about the result of the blood sample but I doubt if he will. But something he said does give me an idea where he might be. Did you keep the cab?

Sambon:

Yes, we can set out right away.

Manson:

Good. Let's hope we're lucky.

<Sambon and Manson in the back of a horse-drawn cab>

Sambon:

<to cab driver> The Oriental Club, as quickly as possible please.

Manson:

Well, surely we can't both be wrong, Louis.

Sambon:

One can never be sure. It needs urgent investigation.

Manson:

I've always suspected that if they can cause disease in certain kinds of animal, they might possibly do so in man. So it's absolutely vital that we find this chap and establish as quickly as possible what he has and hasn't got in his blood.

Sambon:

Before he vanishes into darkest Africa. God help him.

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<Inside the Oriental Club, camera pans onto a seated man drinking brandy, appearing drunk>

Drunk man:

<laughing> Too far! *<takes another brandy from waiter>* Oh and about time too, thank you very much. Have you got a drink? *<more laughter>*

00:08:08:17

<Camera pans room again, focuses on two elderly men watching a drunken man across the room>

1st elderly man:

Disgusting!

<Drunken man shown shouting incoherently and reeling around; two young soldiers help him to a couch>

1st elderly man:

The blithering idiot! He must be a new member.

2nd elderly man:

Most probably. What has happened to the club? I don't know.

<Sambon and Manson arrive at the club and approach the drunken man, now indisposed upon the couch. They attempt to rouse him by slapping his face. He is perturbed and pushes Manson to the ground>

Drunk man:

Hey! Get off me! What the devil's going on?

<Later. Sambon and Manson drink together in a drawing room; Lady Manson enters>

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Sambon:

<lauging> You should have seen your face!

Lady Manson:

Oh, it's you, Dr Sambon. I wondered who it was. I could hear laughter from the other end of the house.

Sambon:

You must forgive us Lady Manson. Patrick was just reminding me of a most amusing incident.

Lady Manson:

Well, I don't want to interrupt your reminiscences; I just wanted to have a word with Patrick. But it can wait until the morning. I'm going to have an early night so I'll be on my way. Do keep an eye on the fire you two, and not too much port, Patrick! How you can complain about a gouty toe and still have a glass every evening, I don't know. <leaves the room>

Manson:

Goodnight dear.

Sambon:

Goodnight, Lady Manson.

<seated> You know, that chap must be the most bizarre patient you've ever had.

Manson:

<seated> What chap? Oh, yes well. Do you know he arrived over an hour late, quite unconcerned.

Sambon:

I wonder what happened to him.

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Manson:

He may well be dead by now, Louis.

Sambon:

Do you honestly believe that it was a trypanosome that we saw in his blood?

Manson:

I think so, Louis. But to suggest that we were the first to find tryps in a white man would be most improper besides being terribly unfair to Forde and Dutton.

Sambon:

Yes, tragic what happened to Dutton.

Manson:

Oh, terribly sad. To die so young. And so far from home. Dreadful.

Sambon:

Mais oui. A great loss. He was such a promising young chap. After all, he was still only 24 when he identified tryps in Kelly's blood, a magnificent contribution to our work.

Manson:

Yes, and of course that's what gave us the first clue to the cause of sleeping sickness.

<Fades into shots of a man falling ill in a cabin then in a hospital bed; Forde narrates and is shown diagnosing trypanosomes in the man>

Forde in voiceover:

He'd been working round the clock for the previous weeks and in some pretty bad weather too – the army had had some sort of manoeuvres in the early months of the

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year and had been transporting men and equipment back and forth day after day without a break.

Well now, having examined him I still thought it was malaria and started him off on quinine. But after two or three days it was obvious that something odd was going on. His fever was not responding and he felt not a tiny bit better. He began to be out of the ordinary tired, puffy round the eyes. Naturally, I had had a good look at his blood, and more than once, but I never saw a single malaria parasite on any of the slides

Manson in voiceover:

Well, you can imagine Forde's delight when Dutton arrived from Liverpool.

<Forde and Dutton shown greeting each other>

Forde:

Well, hello Dutton! Welcome to Bathurst. It's very good of you to come so soon after such a long journey.

Dutton:

I'm glad to be on dry land again. It's been a pretty tiring journey.

Forde in voiceover:

It was just possible that this brilliant young scientist might be able to find out the cause of Kelly's illness and identify those strange parasites.

<Dutton shown at the sick man's bedside, looking into a microscope. Forde enters>

Forde:

I'm so sorry, Dutton, you must forgive me for keeping you waiting.

Dutton:

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You know what your wriggly worms are don't you, Forde? Without a shadow of a doubt they are trypanosomes. I've got three in the field now, have a look for yourself.

Forde:

<looks into microscope> Trypanosomes!

Forde in voiceover:

I knew all along there was something quite out of the ordinary.

Forde:

And you think they're also responsible for Kelly's fever?

Dutton:

Well, it's very much on the cards. They are almost indistinguishable from the ones David Bruce found in diseased cattle a few years ago. The tryps get carried to the animals by the tsetse fly. I wonder if the small tsetses here on the river could be the carrier of the parasites which got into Kelly's blood! Bruce himself, you know, had never seen tryps before and like you his first thought was that they were malaria. So you're in good company. Forde, let me tell you, nobody has found tryps in the blood of a white man before now. I congratulate you on your most important discovery. You must let them know at home as soon as possible.

00:16:51:11

<Return to Sambon and Manson in former positions, seated, in drawing room>

Manson:

We can imagine, Louis, how excited they must have been finding tryps in a white man; something quite unheard of at the time. Of course, we all thought like Forde and Dutton that this Gambian fever was an entirely new disease. Do you remember the excitement when Dutton eventually showed us Kelly in Liverpool?

Sambon:

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I have to say, I didn't think Kelly looked so very ill at the time. I was rather surprised when I heard he had died six months later.

Manson:

Well, we didn't know what we were dealing with then, but we had made a start. Funny how often you see something quite new and then sure enough soon afterwards you observe exactly the same thing again. That's what happened a few weeks later when I got that letter from Haversham asking me to see one of his patients.

<Fade into shot of Manson holding a letter, then talking to a female missionary opposite him at a desk>

Manson:

Dr Haversham tells me you went out into the Congo about fifteen months ago and that you've been there at the missionary station since then.

Female missionary:

That is correct, my husband and I work there.

Manson:

And he also tells me that you're normally in good health.

Female missionary:

Yes, apart from a few mild attacks of malaria, that is until this recent illness that has brought me home. It all started with a bite on my leg. At least, I think so, and so does my husband. It was an awful bite, it got very red and swollen and was truly unbearably painful. My husband thinks it was caused by one of the blood-sucking flies on the river. But, of course, that is just his opinion, I don't mean to tell you ...

Manson:

Oh, he may well be right my dear. I'm grateful to you for your help. Now, pray continue.

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Female missionary:

Well, doctor, last August I began to get these bouts of fever. They come every now and again. I get better in between but I'm never really well. I feel so tired. I seem to have no energy, the smallest task seems to exhaust me.

Manson:

I see. Well now, I think I'd better examine you.

<Return to Sambon and Manson in drawing room>

Sambon:

And clinically you found her much the same as Kelly?

Manson:

Indeed. It was the very same combination of signs and symptoms – the fatigue and shortness of breath, that puffy look under the eyes and the same characteristic rash.

Sambon:

It's interesting the way she was so sure that her illness resulted from the bite on her leg.

Manson:

Mmmm, that's why it's so important to listen to what your patients tell you, Louis. But I was completely absorbed with the idea that this might be another case of Gambian fever. And when we found the tryps in her blood, that was confirmed.

Well, then she left hospital and went to the seaside for a holiday. She seemed much better although she still had the odd tryp in her blood. She was remarkably free of symptoms so after that I saw her less frequently and of course it was just then that we heard about the outbreak of sleeping sickness in Uganda.

Sambon:

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Ah, yes. I can remember our shock, almost disbelief at the news. But, of course, as you know, the problem was not solely a medical one.

Manson:

No, indeed, the political implications of failure were of great concern.

<Fade into shot of Colonel David Bruce smoking a pipe in a boardroom meeting; Manson is one of those seated around the table>

Colonel Bruce in voiceover:

On the 25th April 1902, I was present at the meeting of the Malaria Committee of the Royal Society, Sir John Kirk in the Chair. The foreign office had been receiving reports of a serious outbreak of sleeping sickness in Uganda, and Council had requested our committee to advise on the problems posed by the alarming spread of the disease, with its economic and political implications.

Sir John Kirk:

Well now, where were we? Oh yes, gentlemen, as you're very well aware the next item on our agenda is one which causes us all the utmost concern and is attracting considerable international interest. The Ugandan protectorate is in the throws of a severe epidemic of sleeping sickness – reports are coming to us from the Colonial Office and other sources that the disease is spreading at an alarming rate. Drs Albert and John Cooke, who first reported the appearance of the disease in East Africa, have informed us that such is the overwhelming number of incurable cases, begging for their help, that they've had no other choice than to close their missionary hospital in Bengria to these unfortunate wretches.

Manson:

That is quite disgraceful!

Major Ronald Ross at table:

And as usual our friends at the colonial and foreign office have taken their time to alert us?



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Kirk:

Well, as you know, Dr Manson, by virtue of his association with the foreign and colonial offices has been doing his utmost to bring home to those concerned, the seriousness of the situation.

Ross:

I'm sure. But what do they intend to do?

Kirk:

Well as a result of Dr Manson's efforts, I'm pleased to tell you that events have now taken a step forwards. The foreign secretary has considered favourably our recommendation that a small commission should be dispatched to investigate the disease.

Ross:

And how do they expect this commission to be funded?

Kirk:

Well, I have a reply from the treasury concerning financial arrangements for the support of the proposed investigation. It has agreed the cost of locomotion to and from Uganda and subsistence allowances shall be defrayed by the treasury. All other expenses to be met by The Royal Society.

Ross:

In other words, the treasury are showing their typical generosity.

Kirk:

Yes, well be that as it may, gentlemen, it now rests with this committee to appoint the members of the commission to be sent out to Uganda.

Ross:

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I hope you realise that it's going to be extremely difficult to find senior and experienced men willing to go?

Kirk:

Yes, perhaps so. There's no doubt we're going to have to look to the younger men. Now, the commission, however small, requires a leader. I would suggest that it should comprise one man who is senior enough to act as this, together with two others. Manson?

Manson:

I have as you know been giving this matter a good deal of thought. Of course I agree, we need a man in charge. He needs to be a good all rounder. I would have thought our Cregg scholar at the London School would fit the bill – I'm thinking of Carmichael Lowe, he's youngish but he's a stickler for discipline and that will be required, and a chap who I feel will cope with the sort of problems that are bound to arise.

Bruce:

I think Ross feels that Cuthbert Christie might be a possibility.

00:24:11:14

Ross:

Yes, he seems to be doing extremely well. He's had a good deal of experience in the tropics you know – all over the place, Central and South America, Africa, and a stint in the plague laboratory at Bombay, working with Haffkine. He should be good in the field I would think.

Manson:

Well he might be just the chap to do the fieldwork, he sounds an independent type.

Ross:

I don't think I doubt that.

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Sir Michael Foster:

Independent or not, what we need is some clear evidence as to his scientific ability.

Ross:

Naturally, I'll look into it.

Kirk:

Well, does anybody have any further suggestions? Yes, Manson.

Manson:

There's been a lot of work done, mainly on the continent, suggesting various bacterial causes of sleeping sickness. We ought to send a good and careful bacteriologist out there now we've got the chance.

Foster:

Manson – isn't there a very promising young chap at The London?

Manson:

Oh, you mean George Sowden? Yes, well, he's only just qualified as far as I know. He's very young. Still he's done very well so far. If he'll go, he'll be as good as anybody.

Ross:

If he'll go.

Kirk:

Well, I must say we don't seem to be inundated with suitable candidates for this commission. So am I to assume that we'll proceed with the matter *a propo* Lowe, Sowden and Christie's willingness and suitability, in order to give the foreign office a quick decision. *<sound of general agreement>* Then I would suggest that this Committee resolves that the government grant body be requested to initiate a grant of £600 towards the expenses of the investigation.

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Finally, there's the matter of apparatus and equipment. I would suggest that these problems are referred to Colonel Bruce, Sir Michael, Dr Manson and Major Ross who will kindly deal with them and report back to us. Agreed? *<sounds of unanimous agreement>*

Now gentlemen, time passes and we must turn our attention to another matter. I have here a letter relating to an outbreak of fever in St Lucia *<fades out>*

<Inside a gentlemen's club, members from the committee meeting sit smoking and drinking>

Foster:

I only heard about it yesterday as a matter of fact.

Bruce:

Damned pity Sowden can't go. We had to expect something like this.

Ross:

Christie's accepted though hasn't he?

Foster:

Oh yes, quite definite about it.

Ross:

Thank God for that. I thought he'd jump at the chance to get out there.

Bruce:

One more to add to his list of trophies.

<Manson enters and joins them>

Manson:

Good evening, gentlemen.

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Foster:

Good evening, Patrick. I thought we might make our task more congenial by meeting here. You have dined I presume?

Manson:

Oh indeed, I'm just waiting for a good glass of port now.

Foster:

I think we would all welcome that. All agree?

Ross:

Rather.

Manson:

Well, what do you think of the news?

Ross:

About Sowden you mean? You know?

Manson:

Oh yes, a little bird told me. But what I thought you'd all be talking about is this plan of running trains underneath London.

Bruce:

Yes, I saw that – they're calling it a tube system to the suburbs.

Foster:

How absurd!

Manson:

What we ought to be thinking about is who's going to take Sowden's place. We're badly in need of a bacteriologist for Entebbe.

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Foster:

You suggested that you might be able to recommend somebody from the London school.

Manson:

Well, maybe, as a last resort. Are you sure there isn't any young officer you could recommend?

Bruce:

Unfortunately no. It's a great pity. I'd go myself if the war office would pay me properly.

Manson:

Well, you know the war office better than I do, David. But I fear they won't cough up a single penny if they don't have to. No doubt you'll all be amused to hear that when I asked my senior class if any of them would like to go out to Uganda every damned one of them stood up.

Foster:

Really?

Manson:

So we're setting up a little examination next week and the man who comes out on top might be offered the chance to go, provided he has the character to take it on. They're all very young to be pushed into the situation in Uganda but maybe it's for the best; one mustn't underestimate youth you know.

Ross:

And when can you let us know the results of your competition?

Manson:

Oh, early next week. There's no sense in procrastinating.

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Foster:

And we will have our decision in good time for the next council meeting?

Manson:

Oh, yes.

Foster:

I suppose you haven't got anybody up your sleeve?

Manson:

Well there is a very good young Italian in the class, but we'll see.

Bruce:

Yes, well perhaps we'd better get down to details of equipment and the programme that this kindergarten is to undertake. Seems to me we must spell out very clearly just what's expected of them. Above all we must specify absolute loyalty to the Society regarding publications and the discussion of results. *<fades out>*

<Return to Sambon and Manson in the drawing room>

Manson:

David Bruce wasn't far wrong when he referred to the first Commission as a kindergarten.

Sambon:

Because they were all very young when you think of it.

Manson:

Well, no doubt David would have preferred more experienced candidates.

Sambon:

Particularly from the army no doubt.

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Manson:

<laughs> Ah well, Louis, you know the rivalry between the army and the London and Liverpool schools.

Sambon:

I wonder what would have happened if I had gone out.

Manson:

Well, you were my first choice.

Sambon:

History would have been different, non?

Manson:

Well, you were older, more experienced and much more secure, in spite of your dubious nationality.

Sambon:

<laughs> I don't think I would have relished that position.

<Intertitle>

British East Africa

Entebbe, Uganda Protectorate

6 months later

<Fade into shots of a field office, Lowe enters>

George Carmichael Lowe:

Good Lord, Castellani, you're still working?

Aldo Castellani:

I'm afraid so, George.

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Lowe:

You must have been sitting at that bench all day. You know, you'll have to slow up a bit, or you'll go mad.

Castellani:

<yawning and stretching> Oh, my dear George, sometimes I think I am beginning to go a little mad. I see things down the microscope and yet, out here, I feel quite unable to believe in what I see. Nothing seems certain. If it was not for your encouragement I couldn't go on.

Lowe:

Come on, things aren't so bad. You're lucky. At least you got something positive to show for your time out here. I came out believing I was going to make my name sorting out Manson's *Filaria perstans* to the resounding glory of The London School, and what do I find? The medical officers out here have proved that *Filaria perstans* has nothing whatever to do with sleeping sickness. Moffat and I have merely confirmed Hodges and Wiggins' work, and no doubt all we need now is for that bastard Christie to put in his brilliant report to finally bury the parasite for good. God knows where he's got to. I haven't seen him for weeks. According to Wiggins he's out chasing butterflies most of the time when he's not kicking baskets of rotten eggs over African chiefs or threatening people with guns. Thank God he's not here.

Castellani:

<laughing> I wonder what Christie thought when Wiggins told that chief he was barmy, eh, and suffered from the brain storms? He was sure they were both going to be murdered – they were very lucky to escape.

Lowe:

Well he was right about the brain storms. <both laugh> Well, and what's gone wrong today?

Castellani:

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You know how I worry. Although I am sure I have discovered a new strep I haven't seen it in enough cases to completely prove its significance. I just need a few more positive post mortems.

00:32:19:02

Lowe:

<looking at Castellani's notebook> You know, you really ought to write up your results even though it is early days. Why don't you put together a paper for The Royal Society and I'll send it in with my report? Well at least it'll show them that we haven't been idle.

Castellani:

Don't you think I ought to get a few more positive results first? Although I am sure it is the strep, I still have to prove it.

Lowe:

Well you must certainly continue the work so that you have enough cases documented to prove that the strep is the cause. And that's going to take time. I think it would be a pity not to put in a preliminary report at this stage. I mean, after all you're pretty sure that your results so far are accurate and highly suggestive and you're only going to say that much. You really ought to get your name attached to the discovery you know. If you wait too long, somebody else will get in there before us. And your theory that this germ is the cause of sleeping sickness is the, well, it's the one good thing to come out of this Commission. Don't forget that Moffat and his friends have got a disaster on their hands with this epidemic and they're more than keen to get on with plans to isolate cases, to prevent the spread of the disease.

Castellani:

I'm so afraid I might not be right, George. I couldn't bear to make a fool of myself and let us all down. The foreign office will be involved with the isolation plans. Just think what it will say about that young Italian, eh, if I involve them in all that money and I'm wrong.

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Lowe:

But nonsense, and what if you're right? And you can come up with a vaccine one day? Think of the lives you may save.

Castellani:

I hope.

Lowe:

Anyway, pack up now and get that report off your chest tomorrow.

Castellani:

No, I'll just carry on a little while longer.

Lowe:

Well not too long, I'll see you later.

<Castellani shown writing way into the night>

<Intertitle>

4 months later

<Castellani looking haggard in bed, smoking, African man knocks at his door>

African man:

Dr Moffat here, Sir. *<shows Moffat in>*

Moffat:

Hello Castellani.

Castellani:

Oh, hello Dr Moffat. It's good to see you.



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Moffat:

Are you all right? You look as though you haven't slept for nights.

Castellani:

No, I don't think there is anything seriously wrong. I'm just tired.

Moffat:

Well, the last couple of months have been rather difficult for you now that Lowe's gone home. And of course your other team member Christie hasn't exactly been available. Life out here can take a lot out of you, as you are finding out young man. We all seem to survive, you know. Look, Castellani, I've had some news via Government House.

Castallani:

My paper?

Moffat:

Yes. The Royal Society is still being difficult over publishing it. The Foreign Office is pushing really hard now for a positive opinion so they can go ahead with plans for the isolation of cases and money for the production of a vaccine.

Castellani:

But what about the results?

Moffat:

Well, despite your increased evidence for the strep, The Royal Society will not commit themselves very far on its significance. Some money is available for the isolation of cases but they feel that the epidemic is a matter of imperial significance, and in a nutshell, they're sending out the big guns. They should be here by the middle of March.

Castellani:

But who, Moffat, who?

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Moffat:

Dr Nabarro, a first class young scientist, together with Colonel Bruce. No doubt you'll be getting a letter in a week or two explaining all this. Now I hope you don't go and take this the wrong way, I know Colonel Bruce can be a bit of a bear but I'm sure you'll find them both helpful and you won't be on your own, and I believe Mrs Bruce is a very kind woman, also a very talented one, though she must have a hard time making up for her husband's boorishness. Anyway, don't forget to come and see me if you're feeling worried. You must look after your health. </leaves>

Castellani:

<eyes to the ceiling, talks to himself> Madonna, they're still not going to publish my paper. They must be sure I'm wrong. I wish I knew what George told them last month. I knew it was too good to be true. So quickly! <snippets of the previous conversation with Lowe, above, heard in voiceover> Still only finding the strep in the terminal stages, never in the early stages; maybe it's just a secondary infection.

00:39:38:02

My God! It may be the trypanosome! One, two, three, four positive since November and one in the blood just before Christmas. Why didn't I tell George before he left? Oh, don't be stupid, *perstans* was just like the tryp and Manson was wrong? Manson can afford to be wrong. Of course, that's why they're sending out the pro's, he has suspected a trypanosome is the cause. I should have told George. What a fool I look! If it is the trypanosome, I can just see Bruce telling me how stupid I've been, because I missed it. I must tell someone about my discovery or someone else will take the credit.

<Castellani working at a desk in his field cabin, Moffat bursts in>

Moffat:

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Castellani! Exciting news! Baker has made the most marvellous discovery and we want you to have a look at it and tell us what you think.

Castellani:

Of course, Moffat, anything I can do.

<Moffat signals for an African colonial officer to enter, Baker accompanies him in>

Baker:

Has Moffat told you, Castellani?

Castellani:

Only that you have made a wonderful discovery.

Baker:

Well, er, this constable came to see me this morning not feeling too well. He has a history of, no, I won't tell you any more, but I would be very grateful for your opinion on his blood.

Castellani:

Of course. *<to African man>* I'm just going to take a sample of blood from your finger.

Colonial officer:

Yes sir, I know.

<Castellani takes sample of blood and examines it under a microscope, accompanied by dramatic music>

Castellani:

Well, as you are both well aware, these are trypanosomes.

Baker:

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You agree?

Castellani:

No doubt.

Moffat:

There, Baker, you're famous!

Baker:

Moffat, you realise what this means don't you? We have trypanosome fever here now as well as in the Gambia. If this thing gets going we're going to have two major epidemics on our hands. As though this sleeping sickness wasn't enough, eh?

Moffat:

I wonder if the tryps could be carried by something like a ... tsetse fly.

Castellani:

<thinks> Tryps in the blood. I must tell Baker about my discovery.

Moffat:

Well that's really quite something, eh, Castellani?

Castellani:

Yes, yes!

Baker:

Well, we'll see about that.

Moffat:

Now don't you go underestimating your discovery, Baker. It's about time we colonial doctors were appreciated for our work. Not all the brains are in London and Liverpool, look how Dutton took over Forde's case in Bathurst, while we're just



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expected to deal with the routine stuff. No thanks, money or time to do anything grand as research. That's left to the real scientists from home.

Baker:

Moffat ...

Moffat:

Please excuse my enthusiasm for my colleagues. Right well ... *<leads out colonial officer>*

Baker:

Thanks again, Castellani.

Castellani:

Oh, Baker?

Baker:

Yes?

Castellani:

There is something I must tell you.

<Fades into shot of boat arriving on river, Castellani on the banks watching, Moffat and Baker join him>

Moffat:

Morning Castellani. Fine morning.

Castellani:

Yes, it's very fresh.

Moffat:

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Well, I hope they're on time. Colonel Bruce likes to be punctual. Hey, look Moffat, there's something that's been worrying me. I must talk with you but you must give me your promise that you will not tell anyone what I am going to say.

Moffat:

Of course. What's the matter?

Castellani:

Since Lowe went home I have examined quite a few cases of sleeping sickness and in a number of these cases I have found trypanosomes in the cerebrospinal fluid.

Moffat:

Good heavens, Castellani! That may have something to do with the disease.

Castellani:

No, I don't think that for a moment. I think the presence of the trypanosomes is merely an accident, just like the *filaria perstans* we found in so many cases. I'm not sure it is of any importance as regards the sleeping sickness and I have only told you because I do not intend to tell Colonel Bruce.

Moffat:

What? Oh, why on earth not?

Castellani:

I only want you to know, because after I have left he may come across it himself and then you will be able to tell him that I've already discovered it.

Moffat:

Well I suppose you know what you're doing. I'll honour your confidence.

Castellani:

I knew you would. Thank you.

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<Boat arrives with Bruce on it, he shouts at the men unloading his equipment>

Bruce:

Watch what you're doing! There's valuable scientific instruments in there! Damned awful country, this.

<Camera pans back to show Bruce sitting with Lady Bruce>

Bruce:

I'll be glad to get all our stuff safely off the boat. What a journey!

Lady Bruce:

Well I shan't be sorry to land. But it hasn't been too bad really.

Bruce:

You realise, I suppose, it'll take quite some time to get all our luggage off? I shouldn't be surprised if we land up with a load of mangoes when it's all unpacked in the laboratories.

Lady Bruce:

Well a few mangoes might be rather nice – you might find something far less acceptable.

Bruce:

God, what a journey!

Lady Bruce:

<stands and walks to side of boat> David! I can see the pier, won't be long now. I think I can see some people waiting for us.

Bruce:

Well I sincerely hope that Dr Castellani is among them. When I think of all those telegrams! First he was going home, then he's going to meet me in Mombasa, then

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at the last minute he thinks he'll meet me here. Heaven help the little Iti if he doesn't turn up this time. *<mumbles something which is drowned out by sounds from the boat>*

Lady Bruce:

What was that, David?

Bruce:

I said he's been damned lucky to get that paper of his published at all.

Lady Bruce:

But he's so young. It must have been very difficult for him out here.

Bruce:

My dear, as always you are being too kind. He behaved very badly.

00:48:35:18

Lady Bruce:

Don't let's jump to conclusions. He may not be nearly as bad as you feel. And you know you're dying to get into that lab to find out what's really going on.

Bruce:

Pity I didn't come out here damned soon earlier. The whole thing's a complete mess!

Lady Bruce:

I'm sure you'll feel quite differently when you meet him, David.

<Bruce and Lady Bruce are met by Moffat, Baker and Castellani>

Moffat:

Dr Moffat, Sir, I hope you had a good trip. Oh and you too Mrs Bruce.

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Lady Bruce:

Not at all bad, thank you Dr Moffat.

Moffat:

Nevertheless I'm sure you must both be quite tired. I should like to introduce some of my colleagues before you get rushed off to see the Commissioner. Dr Baker, one of my medical officers. I'm sure you'll be as pleased as we are at our great news. Dr Baker has made a great discovery – only two or three days ago he discovered trypanosomes in the blood of one of his patients, a man from Uganda.

Bruce:

Oh, that's really very interesting. Well done.

Moffat:

Oh, and have you met Dr Castellani?

Bruce:

I feel I've waited quite some time for this.

<Bruce and Castellani in Castellani's field hut>

Bruce:

Before I say anything else, Castellani, I must tell you I consider your behaviour disgraceful!

Castellani:

Please, sit down Colonel Bruce. Would you like a drink?

Bruce:

No thank you! We'll go through your work first.

Castellani:

Of course. But before I show you my work, I want to tell you something in confidence.

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Bruce:

Oh yes?

Castellani:

It is very important to me. And it is only since this morning that I've decided to tell you. But I want you to promise certain things before I do so.

Bruce:

I'm not in the habit of making promises. What on earth is all this nonsense, Castellani? You're not going off your head are you?

Castellani:

No, there are many times out here when I have thought I was going off my head but I can assure you I'm perfectly sane about what I'm going to tell you now.

Bruce:

This is not a personal matter I take it?

Castellani:

Oh, extremely personal to me! It concerns my work! I have discovered something which I begin to think may be of importance. At first I did not but now, now I quite simply do not know and I must do more work to settle the question.

Bruce:

And what are these conditions? *<sits>*

Castellani:

<takes paper and reads from it> First, that I may remain a few weeks more in Uganda to continue my experiments. Secondly, that all my work until I leave Uganda will be independent and my own; and thirdly, that at the end of my stay in Uganda I shall write a paper and this paper will bear my name only.

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Bruce:

I suppose it could be worse.

Castellani:

Can you agree to these conditions Colonel Bruce?

Bruce:

I don't seem to have any choice! But you'd better make sure that this paper you're going to write is a damned sight better than the one you sent us in October. Well now, I think perhaps you'd better tell me what it is you think you've found that you think may be so important.

Castellani:

Last November, not long before Dr Lowe left for England, I was looking for streps in specimens of cerebrospinal fluid, taken from cases of sleeping sickness. I had had the idea of centrifuging the fluid in order to catch any bacteria in the deposit and increase my chances of finding them.

Bruce:

Yes, yes, hmm.

Castellani:

I found a trypanosome.

Bruce:

Did you by Jove? Are you sure? Have you found tryps in any other cases?

Castellani:

Yes! I've looked at fifteen cases and found tryps in the fluid of five of them. I also found a tryp in the blood of one of these cases just before Christmas.

Bruce:

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Well, that's interesting. There's no good speculating about this – you're sure it's tryps that you're seeing?

Castellani:

Of course, Sir, identical with the ones Dr Baker found in his policeman!

Bruce:

How much longer do you need here?

Castellani:

About a month.

Bruce:

Well, since I'm forced to accept your terms, you'd better get started. You're on your own as far as experiments are concerned. Mrs Bruce and I, together with Sergeant Gibbons will give you all the technical help you need. We must make sure the others don't know what you're about. That means keeping them out of the laboratory, that's not going to be easy.

Castellani:

Thank you, Colonel. Also when I have finished my paper, would you be kind enough to look at it and correct any of my language mistakes?

Bruce:

Yes, yes of course. Now, first things first. Number one, you must show me how you carry out this examination and demonstrate the presence of a trypanosome. That'll give us a starting point anyway. And if you can't do that, the whole thing is off! Of course the trypanosome, assuming it's there, may be of no more significance than the *Filaria perstans* – these natives are full of parasites. But, on the other hand, as you well know, it could be of enormous significance if it turns out to be the specific cause of sleeping sickness. Now, I can have no opinions in this matter until I have more evidence and that's going to take a lot of hard work in quite little time. But I must say I tend to think the bacterial agent is more likely – I'd personally put my



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money on the streptococcus. But that is mere guesswork at this stage. Now, you must keep an open mind on this too, Castellani. It's a very serious situation in Uganda.

The Foreign Office is pressing the Royal Society for a firm decision so that they can get money from the treasury to go ahead with their segregation plans. And, of course, the search for a vaccine. As yet we have no proof of the nature of the agent against which we're expected to make a vaccine, God help us! The Royal Society's in a very difficult position, without watertight evidence to support our views we expose ourselves to severe criticism and discredit. That's why we didn't rush to publish your preliminary report. I'm sure you understand now a little better just why we acted as we did.

Castellani:

But of course.

Bruce:

But that's enough for one evening. Well, little did I know when I set out just what I was going to hear. We haven't even looked at your notebooks yet. Tomorrow you must show me your centrifuging technique, find a trypanosome I hope, and then later in the day we'll go through the bacterial work. And don't forget – an open mind!

Castellani:

Yes, Colonel.

Bruce:

Now, what about that drink, eh?

00:55:33:22

<Return to Sambon and Manson in drawing room>

Manson:

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Poor old Castellani certainly had a difficult time in Uganda.

Sambon:

Well at least they knew that his discovery marked a completely new era in the study of sleeping sickness.

Manson:

But it's a great pity it's been the subject of this dreadful controversy. I do so deplore this kind of thing.

Sambon:

I agree. Nobody can deny that Castellani was the first to discover tryps in the cerebrospinal fluid. And I can't believe he failed to consider the possible significance of the trypt until it was suggested to him by David Bruce.

Manson:

No, Castellani isn't as stupid as that.

Sambon:

You know now that's what people are suggesting.

Manson:

I know, Louis. But I think he quite simply didn't know whether the strep or the trypt was the cause. He was in a complete quandary.

Sambon:

Unfortunately his strange confidences with Baker and Moffat did nothing to help his reputation.

Manson:

Ah, he was just hedging his bets, desperate to ensure that he didn't lose the credit for his discovery.



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Sambon:

Well, that's what they're trying to do now.

Manson:

It's a pity people aren't more concerned with the discovery and less with who made it. Even the lay press is involved now.

Sambon:

They certainly didn't show much concern for it in the beginning. I was the only one at the summer meeting who considered it to be the likely cause of the disease.

Manson:

Well, we were all being very cautious. And quite right too. The question was a difficult one and it still is.

Sambon:

But surely, Patrick, the nature of the disease must have become clearer to you with your lady patient from the Congo. After all, she was thousands of miles away from the tropics and completely isolated from any source of infection.

Manson:

Oh decidedly, Louis. That was the first time I was able to observe the progression of the disease in one patient. When I first saw her, her signs and symptoms were identical with those that I'd observed in Kelly, including the tryps in the blood. So I considered at the time that they were both cases of Gambian fever, until some time later when I received that letter from her husband asking me to go and see his wife because her condition had deteriorated.

<Fades into shot of Manson at the bedside of lady missionary seen earlier>

Manson:

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<in voiceover> When I arrived, I saw a very sick woman. It was then I recognised the signs of what has been known for centuries as sleeping sickness. A short time later she died from the disease. The autopsy report bore out my suspicions.

<Return to Sambon and Manson in drawing room>

Sambon:

Well surely you were then convinced as I have been for some time that the single cause of all these stages of the disease was the trypanosome?

Manson:

I think so, Louis. But I'm still not sure. Although we've come some way in our understanding of the cause, we're still some way from finding a cure.

Sambon:

Well, let us hope, mon ami, that in our lifetime sleeping sickness will have become a thing of the past.

Manson:

Well, let's hope so, Louis, but I have a feeling that we would be foolish to underestimate the trypanosome.

Sambon:

We shall see.

<Back to lecturer explaining the history of research into African sleeping sickness, to a room of students from the beginning of the film>

Lecturer:

And so I must end this lecture more or less where I began. Despite all the discoveries nearly a century ago which led to an understanding of the complex factors causing this disease. Despite the enormous work during this century we are yet again faced with a serious outbreak of sleeping sickness in East Africa.

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Trypanosomes still cause disease over an area of 4,000,000 square miles of Africa, yet sadly the many problems it faces today make the implementation of control measures extremely difficult.

More than sixty years ago Sir William Leishman, one of the army's most eminent pathologists summed up the situation in these words:

Tropical research has no reason to be ashamed of the amount of light which it has thrown on dark places. But it's only here that this knowledge can be readily and above all economically applied to the control of the disease in question. The lines of approach are enumerable and each disease has its own unsolved problems and its own difficulties.

<End credits>

<in addition to those at the beginning>

Make up – Sheelagh Wells; Karen Turner.

Wardrobe – Kate Fox/ Lance Milligan.

Sound recordist – Mike Russell.

Set builders – Steve Hall; Paul Harrison.

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Lighting cameraman – Paul Bernard.

Music – Kevin Pyne; Roger Cotton.

Assistant Editor – Richard Monks.

Film Editor – Anthony Palmer.

Production Manager – Lindsay Bennett.

PA to the Producer – Rosemary Tilden.

With thanks to:

The Royal Society.



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The London School of Hygiene & Tropical Medicine.

The Liverpool School of Tropical Medicine.

The Royal Society of Tropical Medicine & Hygiene.

Dr LG Goodman.

Mr D Fisher.

Sir Ian McGregor.

Dr AJ Duggan.

Mrs J Stokell.

The Film Unit would also like to thank The Wellcome Trust for their support in the making of this film.