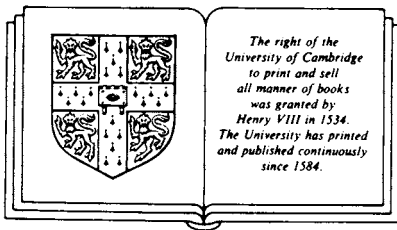


Science and empire

EAST COAST FEVER IN RHODESIA AND THE TRANSVAAL

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Contents

<i>List of illustrations</i>	page viii
<i>Preface</i>	ix
<i>Acknowledgments</i>	xiv
1 Prologue	1
2 The places and the players	7
3 A new disease?	22
4 The search for an expert	52
5 Robert Koch in Bulawayo	87
6 Joseph Chamberlain	121
7 Arnold Theiler, Charles Lounsbury and Duncan Hutcheon	137
8 The fight against East Coast fever	181
9 The African-owned cattle in Rhodesia	223
10 Two more parasites and another new disease	239
11 What is East Coast fever?	258
12 Epilogue	277
<i>Notes and references</i>	290
<i>Index</i>	375

Illustrations

- 1 Southern Africa: map showing places mentioned in the text and showing railroads as of late 1901 page 4
- 2 Laveran's illustration of what he regarded as the atypical and typical forms of *Piroplasma bigeminum* 145
- 3 Rhodesia: map showing the native districts in about 1902 228
- 4 An illustration supposedly showing a form transitional between the "coccus" of the mild form of Texas fever and the twinned, pear-shaped parasite of the acute form (after Smith and Kilborne) 257

1

Prologue

Almost all of the cattle in Rhodesia died in 1896: “total annihilation of the cattle by rinderpest – no milk, no beef in a few days – but lots of lovely smells from dead cattle.” Thus Earl Grey, writing to his son from Bulawayo, Rhodesia, May 8, 1896.¹

Less than six years later, after a slow and costly replacement of the cattle that had been wiped out by rinderpest, another almost invariably fatal disease of cattle broke out in Rhodesia. Originally thought to be a virulent form of an already well-known disease, Texas fever or redwater, it was, in fact, a disease never before seen in Rhodesia, a disease unknown to veterinary science, a disease that we now call East Coast fever.

Stanley Portal Hyatt, who made a living by operating ox-drawn wagon trains, and who was bankrupted by the death of his oxen, later wrote:²

Rinderpest was the Act of God. The spread of African Coast Fever was due entirely to the criminal folly of men . . . The Chartered Company’s government was bombarded with requests, prayers, petitions to take prompt measures . . . The only answer was . . . that the plague did not exist . . . the reason was obvious – Rhodes had just died, and to admit the existence of a new cattle disease would have sent down Rhodesian shares.

Months afterwards, when all the cattle on the high veld were dead, the government found itself compelled to admit that mistakes had been made . . . I attacked them so strongly in the columns of one of the great London financial dailies, that they were compelled to do something. What they did was send Dr. Koch out to investigate. He could not stop the disease, because there were practically no more oxen to die; but he could tell them the cause of it.

Hyatt’s letter, dated Hartley, Mashonaland, October 1, 1902, appeared anonymously in the *Financial News* on November 28, 1902, a few days after the great German bacteriologist, Robert

Koch, had been asked to undertake an investigation. Hyatt was wrong in his belief that his letter provoked the employment of Koch, he overvalued the results of Koch's work, and he was probably wrong in believing that the spread of the disease could have been prevented. But he was not wrong about the British South Africa Company's concern over the price of its shares. The day that his letter appeared a copy was sent by the Company's managing director in London to the Company's administrator in Salisbury with a covering letter:³ "Some idiot sent the enclosed letter to the Financial News and it appeared this morning. Fortunately it is so obviously biased and extravagant that it produced no effect on the market . . . Do you think you can spot the writer?"

East Coast fever was not a new disease, but it was unknown to veterinary practice or veterinary science until it appeared in epidemic form⁴ in Rhodesia late in 1901. The spread of the disease produced an angry public reaction directed against the local representatives of the British South Africa Company and an equally stubborn refusal by the public to follow sound expert advice. Urgent requests for help and advice went to Australia, Cape Town, Buenos Aires, London, Paris, Toulouse, Berlin, Baton Rouge and even the famous Texas cattle ranch, the King Ranch. The progress of the disease, and of the investigation of it, were followed closely by veterinary scientists throughout the world. The colorful and controversial Colonial Secretary, Joseph Chamberlain, furiously opposed the employment of a famous bacteriologist to investigate the disease because that bacteriologist was a German. In spite of Chamberlain's objections, Robert Koch, who was one of the founders of modern bacteriology, was brought from Berlin to Bulawayo at great expense (including a personal fee equivalent to £200,000 today), spent more than a year in Bulawayo and contributed little that was useful. While Koch was at work in Bulawayo, in South Africa a salaried government entomologist, Charles Lounsbury, and a salaried government veterinary bacteriologist, Arnold Theiler, sorted out the facts and got most of them right. It took more than fifty years to bring the epidemic fully under control in Rhodesia and South Africa. And all this may have been caused by a single infected tick or infected animal that managed to find its way, by sea and land, from Dar-es-Salaam to Umtali.

The spread of the disease

The annual Umtali Agricultural Show, in late April and early May, 1901, was a great success. Twenty prizes were awarded for cattle and the local newspaper, the *Rhodesia Advertiser*,⁵ commented on May 9, 1901: "The cattle exhibits were really extraordinary for such a place as Umtali both as regards to quality and variety. We have no hesitation in saying that there are few places in Africa that could compete with Umtali for the quality of its cattle." On May 16, the *Advertiser* reported that a speaker at the Agricultural Dinner on May 3 had said that "the class of cattle now in Rhodesia . . . were much better than what was here before the rinderpest." After votes of thanks, the band struck up *God Save the King* and "there terminated one of the pleasantest social functions ever held in Umtali."

Less than a year later, on March 18, 1902, Lionel Cripps, whose farm was in the hills of the Vumba, well outside Umtali, made an entry in his diary:⁶ "Large numbers of cattle are dying and have died during the past few months – the [illegible] have lost nearly all their spans [of oxen] and losses heavy in town. In Melsetter the disease is spreading and it is now bad in Salisbury."

Nothing had appeared in the *Rhodesia Advertiser* from May 1901 through September 1901 to suggest any problem. Although three cattle belonging to the Sanitary Board were quarantined for red-water in late June, the *Advertiser* published no reports of serious cattle disease in July or August, or even as spring approached, as it does in the southern hemisphere, in September. But on October 10 the *Advertiser* reported that the Sanitary Board had lost six more cattle and its issue of October 24 contained an official proclamation listing five areas in which "Red-Water" had broken out. It said: "By virtue of the provisions of the Animals Diseases Act of 1881, I hereby declare the said areas to be infected . . . no animals shall be allowed to stray or to be removed into any uninfected area from the said infected areas." One of the areas was the Quarantine Station of the Umtali Sanitary Board (19 cases) and another was the Waterworks Farm, Umtali (29 cases). But the other three areas, with a total of 112 cases, were in Melsetter, which is nearly sixty miles south of Umtali and considerably further along ox-cart trails.

The spread was relentless. The *Rhodesia Advertiser* for November 14, 1901 reported that the Sanitary Board had been put to heavy expense in hiring cattle to replace those affected by the disease. On

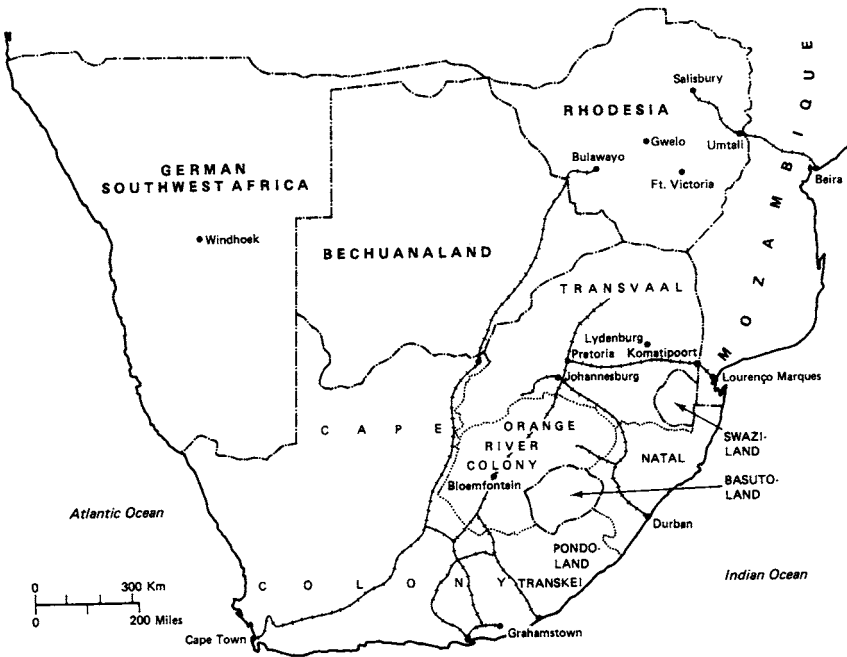


Fig. 1 Southern Africa: map showing places mentioned in the text and showing railroads as of late 1901. Dar-es-Salaam is not shown; it is on the coast of German East Africa (Tanzania) about 1,000 miles north and 500 miles east of Beira. Based on a map in R. I. Rotberg, *The Founder: Cecil Rhodes and the Pursuit of Power*, New York, Oxford University Press, 1988.

December 5, the *Advertiser* carried another infected area proclamation, this time dealing with the Penhalonga Valley a few miles north of Umtali, although there was still no comment in the news columns. By January 23, 1902, we find another official notice in the *Advertiser*: “Transport Riders and Cattle Owners in the Umtali district are warned that by reason of the thorough infection of the Umtali commonage with the ‘RED-WATER TICK’ Outspanning or Grazing Animals on this ground is dangerous, as by so doing there is considerable risk of losing unacclimatized cattle, and of spreading the disease throughout the district.”

That notice appeared again on January 30, 1902, but it was probably far too late to check the spread of the disease, even if that had ever been possible, for in the same issue we find that “the disease is now unusually prevalent in the Salisbury, Umtali and

Melsetter districts.” Within three months of the October outbreak the disease had reached Salisbury, 165 miles west of Umtali and was on its way south to Bulawayo, 275 miles south-west of Salisbury.

The *Bulawayo Chronicle* for April 25, 1902 noted that the disease had reached Gwelo, halfway from Salisbury to Bulawayo, where the “outbreak has been the sole topic of conversation in town for the past two days, for its serious nature cannot be underestimated.” The same issue of the *Chronicle* contained a Government Notice: “during the prevalence of the Redwater in the Salisbury and Umtali districts, permits will not be granted to allow stock to move in the direction of Salisbury beyond Enkeldoorn.” (Enkeldoorn, now Chivhu, is about 90 miles south of Salisbury and 85 miles north-west of Gwelo.) On April 29, the *Chronicle* reported that no cattle were to proceed from Gwelo towards Bulawayo, or to cross the Shangani river in the opposite direction (the Shangani is about two-thirds of the way from Bulawayo to Gwelo). But, on May 7, we read in the *Chronicle* that “a disease – whether redwater or not does not seem to be ascertained – has broken out . . . at Khami [a mere seven miles south-west of Bulawayo],” that “farmers in general view the situation with gloomy foreboding and fear that many cattle will be carried off,” and that “the price of donkeys has risen further.” The *Chronicle* of May 12 reported that “the much dreaded pest has made its appearance in Bulawayo.” Much dreaded indeed:⁷ “there was a stampede on account of it, in all directions, of white men fleeing with their cattle from the African Coast fever which had worked its way from Beira via Salisbury to Bulawayo.”

Many Government Notices had appeared, designed to prevent the spread of the disease. A very different notice appeared on July 24, 1902, advising the public that “Farmers, Transport-Riders and others” would be given assistance in purchasing donkeys.⁸ On August 5, 1902 the Board of Directors of the British South Africa Company appropriated £10,000 for that purpose and soon began attempts to buy donkeys in India and Spain,⁹ thus conceding that oxen could no longer be relied on for transport in Rhodesia.

The annual Umtali Agricultural Show was held again the next year; it began on May 2, 1902. The *Rhodesia Advertiser* for May 8 described it as “a brilliant success,” but there were no prizes for cattle. The cattle disease had appeared in Umtali in October, 1901; by May, 1902, there were no cattle left to compete for prizes. And if

there were a few cattle still alive, their owners were certainly not going to risk bringing them to or anywhere near Umtali.

In the chapters that follow I will tell how the public reacted (usually by blaming the government while not cooperating with it); tell how several governments (that of the British South Africa Company, which governed Rhodesia, that of Great Britain, and those of South Africa) responded; tell of a prolonged and complicated search for expert advice; tell why, for purely local political reasons, the British South Africa Company insisted that Robert Koch work in Bulawayo instead of Pretoria and why that mattered so much; tell of the work of veterinarians and of scientists (especially Robert Koch and Arnold Theiler); tell how difficult it is to prove that a new disease is a new disease and to identify its cause; tell of the long struggle to contain the disease by quarantine, dipping to kill ticks, fencing and even the eradication of herds; tell what we know about East Coast fever today; and tell why Joseph Chamberlain, outraged at being asked to secure the services of Robert Koch, scribbled:¹⁰ “if the Royal Society has another candidate I would suggest to Rhodesian Government that Bacteriology is not entirely ‘made in Germany’. Then if they still want *Koch* they may ask him themselves.” They did want him and they did ask him themselves – much good it did them.