

CONTINENTAL CALAMITY 1895-1896

THE TUMULT in the Transvaal which involved the whole of Africa South and attracted the attention of the world at large, tended to dim in the annals of history the considerable development in fields other than political. They were in fact of greater importance since they dealt with 'the conquest of Nature' and not the temporary aberrations of 'Man'.

Pasteur had died on the 28th September 1895, leaving a legion of disciples throughout the world. His mantle fell squarely on the shoulders of Robert Koch, now the recognised wizard of 'the new science' which compounded within it applied chemistry and other disciplines. Medical sceptics of all persuasions withdrew their early opposition. 'The thermometer and the microscope', observed *The Veterinary Record* in an editorial 'have afforded immense assistance in the diagnosis of disease and are now admitted as essential aids in everyday practice. The time has not long passed since they were looked upon as toys by many good old practitioners who felt pity and contempt for the man who used anything more than his unaided senses to diagnose a case.'

That good old practitioner, Samuel Wiltshire, sent from Natal to the United States in 1893/94 to examine advances in investigating Redwater or 'Texas Fever' which Theobald Smith and Kilborne had ascribed to ticks, flatly refused to believe it. 'As to the means by which Redwater is spread', he reported to his Government, 'I am unable to accept the theory held at Washington that the disease is conveyed by the bite of ticks.' Like many other well-intentioned speculators, he believed that the 'germ' was in the soil. 'No matter what views we hold', he wrote, 'they have yet to be subjected to the strictest scientific tests which can only be done by specially-trained Bacteriologists with well-equipped laboratories, sheds and kraals and carefully-selected animals.' Natal had none of these things and its Governor Hely-Hutchinson, had to rely on a British Army surgeon, now Major David Bruce, to compensate for them. The Cape, foresightedly equipped, now added to its advantages the appointment on the 19th July 1895 of precisely the required expert - Charles P. Lounsbury, entomologist.

The Cape had encountered an extraordinary imbroglio with its prize piece, the Graham's Town Bacteriological Institute and its justifiably self-important director, now receiving £1,000 a year. Edington had paid for the total cost of the land, buildings, equipment, staff salaries and upkeep through massive sales of vaccines for Smallpox and animal diseases. He was therefore in a commanding position, enhanced by his statement that he had found an immunising agent against Horse Sickness whose nature he would not divulge beyond ascribing the cause to a fungus. Alleging that his experimental animals were either old or deformed (able-bodied horses were prohibitively costly), Edington sought and obtained the assistance of the Cape Colonial Prime Minister, Cecil Rhodes in his private capacity in obtaining 20 able-bodied horses from Mashonaland (where Horse Sickness murderously continued) on which to test his specific. Rhodes promised him £2,000 payable by the British South Africa Chartered Company if his experiments were successful.

Since his colour-illustrations had to be printed in England, Edington's 1894 Report was not laid on the table of the House of Assembly until the 14th July 1895. By then he had so far incensed some of its members that a Select Committee, appointed on the 11th July, was investigating his Bacteriological Institute and his part in it. They had taken violent exception to two letters written by him to the Colonial Secretary on the 30th April, the one announcing his discovery of a protective vaccine against Horse Sickness ('I anticipate that the people of South Africa will

6 consider that I have rendered invaluable service to the country') and the other claiming a percentage of the profits from his vaccines. The fiery Cape politicians particularly objected to his mysteriousness over the Horse Sickness vaccine and his arrogance in asking, as a paid civil servant, for participation in profits. On the latter point, Edington was on sure ground and much evidence was led to prove the justice of his claim, locally and abroad. The esteemed Dr W. H. Ross in charge of the Leper Institution on Robben Island forthrightly informed the Committee that he received 5% commission on all paying patients. Other official doctors were similarly rewarded.

Edington had already been informed by the Cape Government that whatever he discovered or his Institute earned, was sui generis the property of the Colony; but the Select Committee went into great detail in both matters, many doctors and expert witnesses being called. Its Report, largely vindicating Edington and praising his Institute, provided illuminating insight into professional and scientific conditions of the times. The venerable Hutcheon contributed notable evidence, forthrightly stating that no professional veterinary surgeon could earn a living in private practice in the Cape Colony nor could the Government afford to station appropriate officers in needful districts.

7 Point was given his testimony toward the end of 1895 by his enforced rejection of a fellow Scot seeking employment. Charles Elias Gray M.R.C.V.S. came from Edinburgh where his father was Controller of Telegraphs, and first earned his living in that department of the Scottish Postal Service. After seven years and well beyond the usual age as Hutcheon had been, he enrolled in the Royal (Dick) Veterinary College where he shared a bench with a bright young colleague, Stewart Stockman. After qualification, he practised in England and then for seven years in the United States. Experienced and eager, nothing could be found for the mature young man at the Cape and, journeying north, he was forced to accept employment as a telegraphist for the Chartered Company in Mashonaland where he had ample opportunity to observe the ravages of Horse Sickness that Edington proposed to prevent.

8 Edington's 'discovery' (whose 'mysteriousness' he hotly repudiated, having openly discussed it in his Annual Reports), was widely publicised in the local press and overseas journals. Having unreservedly withdrawn his claim for a percentage of vaccine profits, he had now to prove the efficacy of his immunological device on the Mashonaland horses provided by Rhodes. It took many tortured months in exalted company and cut the vainglorious bacteriologist down to size.

9 Rhodes himself, active in all his capacities as chairman of De Beers and the Chartered Company as well as Cape Prime Minister, had special problems as Empire builder. His eye was on 'the all-red route' from Cape to Cairo. Its sections were falling into place. Southern Bechuanaland was annexed to the Cape in 1895 and Northern Bechuanaland remained a British Protectorate under the Christian king Khama. The Chartered Company flew the British flag over Matabeleland and Mashonaland (already called Rhodesia) and far to the north, Uganda had become a British Protectorate in 1894. Rhodes' railway would pass through Khama's country and he persuaded the British Government to transfer the Protectorate to the Chartered Company. Khama and his powerful colleague, Chief Bathoen, immediately left for England to interview 'the great white Queen' herself at Windsor Castle on the 20th November 1895. The protagonists of that drama were within weeks to be involved in a conflict far greater and more significant than the criminal and political activities which temporarily defeated Rhodes.

10 One of Queen Victoria's ladies-in-waiting recorded the scene at Windsor. The Liberal Government which had trafficked with Rhodes had been ousted and the Conservatives under Lord Salisbury now determined policy. Its officers – the Secretary for the Colonies, Joseph Chamberlain in formal levée dress and irksomely deprived of his orchid, and the Under-Secretary Lord Selborne (very recently succeeded to his father's title) – were in attendance with officials of the

Court. Selborne, it was said, adored Joe and pronounced Khama a better Christian than most and very intelligent. A State reception was staged in a drawing-room lined by Life Guards with drawn swords and the Queen presided on an improvised throne. The native chiefs presented their odoriferous gifts of leopard-skin karosses and the Queen assured them of her pleasure in having them under her rule and protection, reciprocating their gifts with bibles, framed photographs and Indian shawls. They behaved immaculately as they had at the State luncheon and withdrew to return immediately to their land, soon to become the ecological cockpit of Africa.

Other participants in the forthcoming contests were taking their places, some – such as Gray sending his telegrams from Salisbury and Theiler feeding his pigs outside Pretoria – very inconspicuously.

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12 The slump on the Johannesburg share market and the persistent drought gave Theiler good cause for his remove into the wings where he could watch the development of the proposed Department of Agriculture, now being framed by a Commission. His practice would have continued, he said, but he would not have been paid whereas cash would regularly be forthcoming from the sale of pigs, cheaply reared from the refuse of Pretoria hotels and Sandoz' brewery. His father refused to grasp why the cobbler did not stick to his last and ceased writing to him.

In the sparsely-settled fiercely hot area of Les Marais, Arnold, Emma and the baby Hans lived in their small tin house with a gay young Swiss wanderer, H. Deschler of Basle whom they had met in Johannesburg, and struggled to start their pig farm. They had virtually nothing, most of Arnold's money having been spent on the move and lost in the Crash. 60 pigs had been bought but there was nowhere to house them and no money to pay for the construction of styes. The one-handed Arnold was virtually a passenger but, labouring like Hercules, Deschler did the work and remained eternally in the Theilers' debt. It was the hardest work all three had ever done and once the pigs were installed (mostly productive sows), there ensued the dreary daily regimen of fetching the swill from the town, an hour away by cart. Soon it would rain and, his special instruments having arrived from München, Theiler would be able to get pathological material from the first cases of Horse Sickness. Aware of Edington's triumphant announcement, it was now a race for the golden guerdon.

13 The withering heat of Les Marais and lack of seasonal rain were matched by the political temperature, greatly inflamed at the end of November by Lionel Phillips' rousing speech in Johannesburg. Going daily to Pretoria, Theiler heard all the rumours, saw the covert preparations, knew of strange movements of huge troops of cattle, odd postings of the ZARPS, and the alertness of the Staatsartillerie and commandos. (Hugh Hall of the Lowveld, later a close friend and collaborator, drove more than 1,000 cattle, sheep and horses to Johannesburg at the behest of the Reform Committee, resting them on the way for a few days at the Irene Estate now owned by J. A. van der Byl only a few miles from Pretoria and evading the ZARPS posted at Halfway House to intercept them.) For all of that torrid December, tension mounted while the Theilers and Deschler with the help of two 'raw Kaffirs' tried to establish a viable proposition on the small plot of ground owned by Sandoz.

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15 Jobless and thrifty, Deschler worked willingly for board, lodging and pleasure in the coöperative manner of the Swiss. He built the pig styes and fences, creeps, troughs and other production necessities. Then he applied himself to the ovenlike tin house where Emma, again pregnant, slaved for them all in unbearable heat and Arnold tried to continue his work in a baking 'laboratory'. Deschler made raw sun-dried bricks to build inside walls to insulate it. Two fell down but

he rebuilt them and laboratory work became possible. It was more important than the comfort of the family. Far in Zululand, in his hut at Ubombo, Major David Bruce had made a discovery that would revolutionise veterinary science and had rushed to Hely-Hutchinson to report it. Not till two months later could Theiler read his hurriedly-printed account.

16 Over the New Year, the crisis ripened and burst. Jameson and his illicit force were overwhelmed on their way to Johannesburg by the long-alerted Transvaal commandos and taken to Pretoria. Tension in the two towns remained high but the vast majority of citizens were aghast at the outrage. Swiss, German and Hollander sections offered their services and did guard duty at night in Pretoria, Theiler, a naturalised burgher, 'armed himself' for such service to which he might be called. Even the English inhabitants, with some exceptions, supported the Government. Kruger acted with admirable calm and magnanimity; but everything that thereafter happened was coloured by the strain and disquiet of the imprisonment of the Jameson Raiders (subsequently delivered for judgment in England) and the detention and trial of the Johannesburg Reform Committee lasting several months. Indulgence was shown some of them who
17 were freed on bail and the Pretoria Club came to be called 'the Rand Reformatory'; but, for the first six months of 1896, Southern Africa was almost totally preoccupied with political tension. Of Theiler's personal friends, many had come to grief including Sir Drummond Dunbar who, serving in the Caledonian Corps to help preserve law and order in Johannesburg during the irruption, blandly returned to duty in van der Merwe's office at its end, was ignominiously
18 ejected and finally arrested.

Against this background of nerviness and instability accentuated by the tragic dynamite explosion at Braamfontein in Johannesburg, Theiler (now without Deschler who had found work in Pretoria) did the daily round of collecting the swill and working in his laboratory, helped by Emma (who also supervised the feeding of 50 large sows and 90 piglets) while an approaching menace portended continental calamity. In the tumult of the times, the presaging signs far in the north passed unnoticed. Theiler himself, deprived of Horse Sickness material by the excessively hot dry weather, found distraction in the gazetting in the *Staatscourant* of the 3rd
19 February 1896 of the Draft Regulations for the proposed Agricultural Department which he hoped would give him State appointment. Even more absorbing was Bruce's official report.

In the courteous manner of the day, the Natal Government sent six copies to the Z.A.R. Republic whose Under-Secretary T. J. Krogh distributed them to his colleagues for Education
20 and Mines, and to *De Volksstem* and *The Press* which reproduced the whole Report with line drawings (made by Mrs Bruce) of the micro-organisms on the 6th and 7th March. The 'Preliminary Report on the Tsetse Fly Disease or Nagana in Zululand' by Surgeon-Major David Bruce A.M.S., presented in manuscript to Sir Walter Hely-Hutchinson under date of the 12th December 1895 and hurriedly printed by the end of the month, became 'one of the classics of
21 parasitology'. In three months at Ubombo in Zululand, living in a rough hut devoid of comforts and convenience, Bruce, with the constant assistance of his wife, had established that the tsetse fly was the carrier (not the cause) of the wasting and fatal disease Nagana, Africa's legendary 'Cattle Fever'. Equipped with a powerful microscope, he had isolated and identified wildly active micro-organisms with flailing tails 'worrying' the red corpuscles. Such flagellate microbes had long been known as 'trypanosomes' whose functions were obscure; but Bruce cautiously called his discovery a 'Haematozoon'. The species was later named after him 'Trypanosoma brucei'. Its identification opened the whole field of sero-immunology and offered the tantalising prospect of converting tropical Africa into an agriculturally productive region.

22 As soon as he could, Theiler obtained from Krogh a copy of Bruce's historic report. Bruce himself, in the excited political situation of the time, was forced to return to his regiment in Pietermaritzburg on standby duty; but in the light of his significant work, was again seconded

23 to Zululand early in 1896. He and his wife remained in the wilds of Ubombo for two years, making classic investigation of Nagana.

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Tropical Africa now bore down in terrifying manner on the whole sub-continent. Warnings had long been received of the dreaded 'Cattle Plague' which, over several years, had worked its way down from the north and ravaged Uganda, destroying vast numbers of wild animals of every kind as well as native cattle. Lugard, John Kirk and other British observers and travellers had often reported it and its erratic southward spread. The Colonial powers appeared indifferent. Rhodes, undismayed by South African disaster, urged the development of his Chartered Territory, now Rhodesia. From the Cape to Salisbury and beyond, the rough road running through the Bechuanaland Protectorate and avoiding the Transvaal, carried an interminable traffic of wagons and carts, carriages and coaches drawn by horses, mules and oxen supposedly 'salted' against disease, bringing 'civilisation' to Mittel-Afrika. Pending the construction of railways, the future of the whole sub-continent lay, not with raids or revolutions or 'Kaffir Wars' but with draught animals. Owing to Horse Sickness, there was not a horse to be seen in many areas of Southern Africa; but the ox, inoculated against Lung Sickness and other afflictions, prevailed throughout the land. The wagon and its span was the lifeline of Africa South.

24 A 'cattle disease' appeared in the Buluwayo district on the 22nd February 1896 and was reported on the 29th. It was thought to be the familiar 'Zambesi fever'. Within hours it was widespread. The Chartered Company's Acting Administrator, A. F. Duncan, sent telegram after telegram to the High Commissioner for South Africa, Sir Hercules Robinson, in Cape Town, advising him of the rapid and fatal spread of the epidemic. Robinson referred them to the Cape Government which consulted its Veterinary Surgeon. Hutcheon knew what impended and took immediate action. Merely to check his judgment, he called for a description of the disease. 25 The answer from Buluwayo confirmed it. The telegram dealt with 'the disease believed to be what is called Zambesi cattle fever'. Hutcheon knew that no one was better qualified to identify it than the telegraphist C. E. Gray. On the 18th March, Gray, now acting as Veterinary Surgeon 26 to the Chartered Company, confirmed his surmise from Buluwayo - RINDERPEST.

On the 4th March, Hutcheon urgently advised his superiors to proclaim a total prohibition on the movement of cattle from the infected areas and wholesale slaughtering of cases. For the 27 Bechuanaland Protectorate, it was too late. Its Resident Commissioner, Francis Newton, telegraphed the High Commissioner at the Cape on the 10th March, urging the isolation of Matabeleland with strong border guards and asking that 'a veterinary surgeon be sent up at once. I have no doubt that this has been done but I understand that Mr Soga of the Cape Service is now at Maritzani near here if the Cape Government could spare his services.' Soga, having 28 completed a course in bacteriology under Edington at Graham's Town, was at Maritzani to inoculate cattle belonging to Dr Thomas Smartt against Lung Sickness. Hutcheon had other uses for him but did his best for Khama whose country was rapidly ravaged by Rinderpest and 29 the livelihood of his people destroyed. He lent Otto Henning to the Imperial Government, sending him at once to Mafeking and Khama's capital Palachwe to try to stem the tide. Soon after, Hutcheon himself attended by Soga arrived at Mafeking.

Robinson, nominally in charge of all British interests in Africa South, cabled Joseph Chamberlain, secretary for the Colonies in London, informing him of the rapidly-spreading menace likely to engulf the whole sub-continent unless prompt and vigorous steps were taken. Hutcheon, 30 eye-witness of the dreadful mortality in Britain in 1865 when 500,000 cattle perished, had made it clear that only wholesale slaughtering and rigorous quarantining (the 'stamping-out policy')

31 could save his domain. Robinson told Chamberlain that by telegraphed Proclamation, he had prohibited the movement of cattle in Matabeleland and authorised slaughtering, informing the Prime Minister of the Cape Colony, J. Gordon Sprigg; the Resident Commissioner of the Bechuanaland Protectorate, Francis Newton; and the President of the South African Republic, S. J. P. Kruger.

32 Kruger acted immediately and issued a similar Proclamation on the 11th March, prohibiting the entry of cattle from Matabeleland, Mashonaland and Bechuanaland. The borders would be

33 guarded. He wanted expert advice and orders were given to ask Dr Theiler of Johannesburg to give it. The Acting State Secretary, C. van Boeschoten wired the criminal magistrate N. van den Berg in Johannesburg to secure Theiler's services and heard in reply that he was now on a farm near Pretoria. Van Boeschoten traced him at Les Marais on the 12th March and Theiler
34 came to town to meet him in his office. By order of the Executive Council of the same day,
35 van Boeschoten commissioned Theiler to go immediately to Matabeleland to investigate the cattle disease and ascertain whether it was the infectious Rinderpest or a similar infectious disease. He would receive £4 a day as well as travelling expenses and should leave within two days at most. Theiler asked for and received £150 as travelling expenses and hurried home to Emma.

36 Van Boeschoten civilly informed Sir Hercules Robinson that the Z.A.R. Government 'has thought fit to send Mr Theiler, veterinary surgeon, to Matabeleland to institute inquiry as to the nature of the disease, trusting that there will be no objection by your Excellency thereto'. Robinson had none and advised that Theiler would receive facilities from the Acting Administrator. The Transvaal Republic was determined to play its own hand. In the meantime, Kruger and his Executive Council constantly authorised the appointment of additional guards to watch the drifts and patrol the borders of the Western Transvaal contiguous to Bechuanaland to prevent the entry of infected cattle.

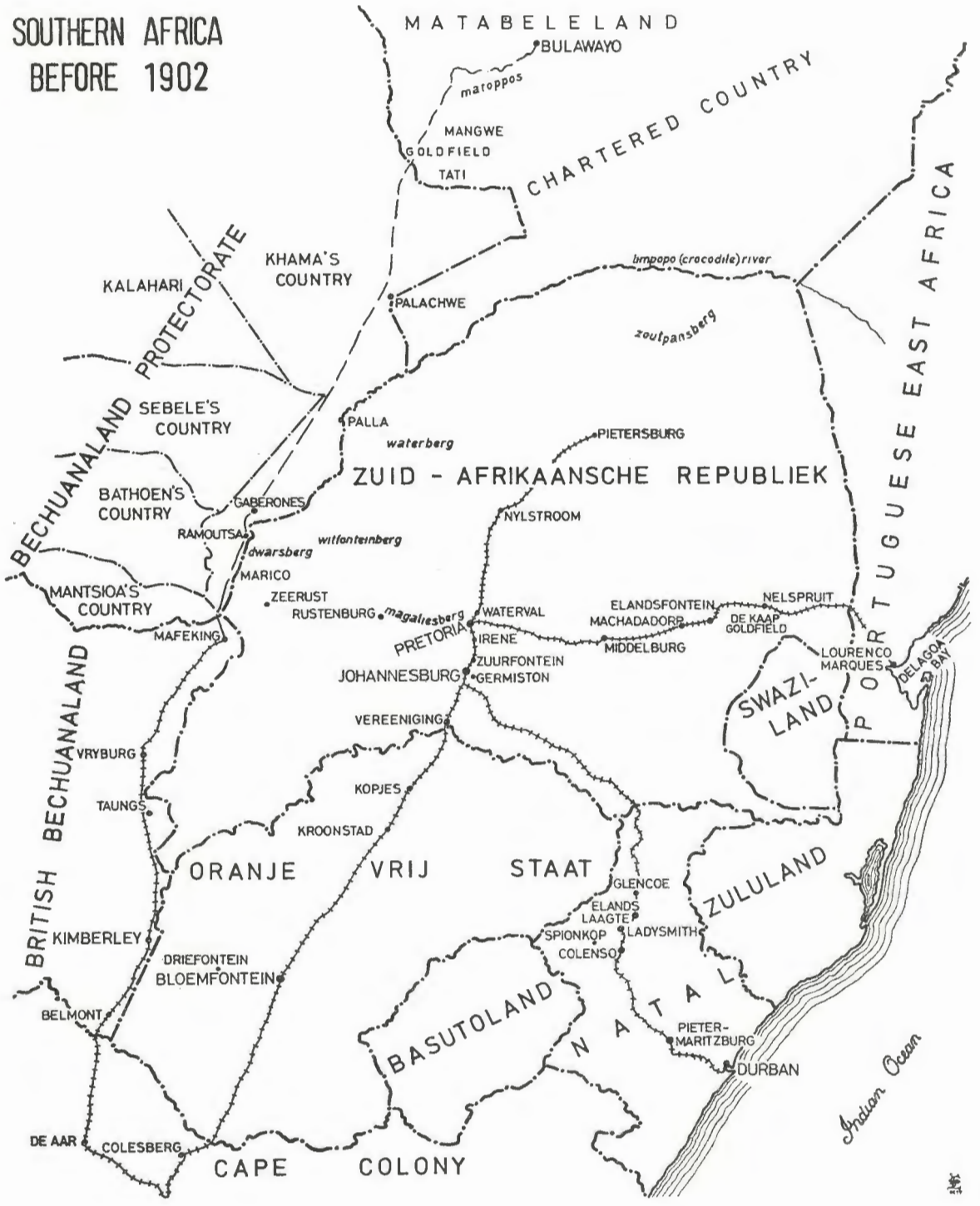
Theiler went home in a characteristic state of euphoria. The Government had intermittently used him in the past but now they had sent for him and entrusted him with an important mission. If he discharged it well, he must surely be appointed to its service in a well-paid post. The journey to Buluwayo by horse- or mule-drawn mail-coach would take 8 to 10 days. Emma would be alone with two Kaffir labourers for at least a month to manage as best she might, fetching the food every day from Pretoria for '50 big and 90 little pigs'. There was no time to arrange assistance. He had to pack carefully, anticipating his needs for postmortems and microscopic examinations, and included some glass tubes for blood samples in case he was fortunate enough to find cases of Horse Sickness. In the fierce and lengthy drought, the disease had failed to appear locally. He also took his camera.

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38 He left at dawn on the 15th March on one of the last effective coaches. Travelling due north toward the Limpopo River at 5 to 6 miles an hour on wandering tracks deep in dust in drought-stricken bush country with little to be seen, the jolted passengers clung to their seats by day and night for 14 to 18 hours at a stretch. On the 19th, Theiler telegraphed en route that the disease whose victims lay in stinking profusion along the Matabeleland road, was indeed Rinderpest and that he was proceeding to Buluwayo. Exhausted after five hideous days of express travelling, he arrived that night in great heat and began his work on the morrow. The Administrator A. F. Duncan (acting for the imprisoned Jameson) gave him all facilities and told him of the various steps taken, including the posting of Otto Henning at Mafeking and Palachwe. Theiler met C. E. Gray and on the 21st, 22nd and 23rd March, did postmortems with him in the field in a lowering atmosphere.

39 There was no lack of cases. The famous hunter-traveller Selous had been appointed a cattle inspector to help the Administration quell the outbreak. 'One might as well have tried to stop

SOUTHERN AFRICA BEFORE 1902



Les Marais – the Theilers' corrugated-iron house in the country outside Pretoria with (left) the collapsible tin shanty which served as a laboratory when Arnold was investigating Rinderpest.



Oxen dead in their traces photographed by Theiler when studying supposed 'cures' for Rinderpest.



Dying oxen, rapidly struck down by Rinderpest, photographed by Theiler when investigating the disease.

Corpses of oxen which lay in thousands on the roads to Rhodesia and elsewhere from 1896 onward photographed by Theiler on his epic journey to and from Buluwayo.



a rising tide on the sea-shore', he wrote, 'as prevent this dreadful disease from travelling steadily down the main roads, leaving nothing but rotting carcasses and ruined men behind it.'

40 By now, the Rinderpest had reached the Transvaal despite the police guarding the drifts across
41 the border rivers. It was in Nylstroom in the north and in the Crocodile River area in the west.
42 Apart from the telegraph, communication with Matabeleland had virtually ceased owing to
43 the closing of the roads and lack of beasts. All that filtered through were the protests of its
beleaguered inhabitants. Emma heard nothing of her husband, his letters reaching her only
after his return. On the 24th March, he was told that the Matabele had revolted and killed a
white man. Confusion ensued. On the 25th, he wired his Government that the cattle disease was
indisputably Rinderpest and that strict measures must be taken. Later on the same day, as the
situation clarified, he wired again that owing to the native rebellion, he was unable to work on
devising a preventive and was returning via Mafeking to meet the Cape veterinarians. All horses
were being commandeered for military purposes and Rinderpest precautions were being neg-

lected. He advised his Government to double the patrols on the Transvaal border.
On the 26th March in an embattled Buluwayo, Theiler reached the age of 29 years in a state
of disenchantment with Africa. Drought, locusts, the 'revolution' of the Jameson Raid, the
terrible Dynamite Disaster, the Rinderpest and now the Matabele Rebellion together with his
personal problems momentarily cowed his customary verve. Then his spirit of adventure super-
44 vened and he applied his energies to withdrawing from the chaotic town (whose defences were
organised on that day by the assembling of a formidable laager) and somehow getting back in
defiance of the rampaging Matabele. He had seen Selous come in and ride off that night with
45 a small troop to the scene of murder and terror. Now he sat down to write his official report
dated the 27th March, clinically describing the disease, emphasising the impossibility of treating
it and urging the adoption of drastic preventive measures.

All routes south were now hazardous. Theiler had intended returning eastward via Salisbury,
Beira and by ship to Durban; but it was no longer possible nor could he return the way he had
come. Duncan and the military advised his taking the longer and dangerous route due south
through the notorious Mangwe Pass in the Matoppos where Matabele might at any time attack.
46 On Friday the 27th March, he left Buluwayo in a mule-drawn coach with two men and two
women, joined at the laagered Mangwe by an Afrikaner. By then, the mules were done and
there were no relieving spans. They continued in moonlight with plodding oxen harnessed to the
coach in the full expectation of attack. The coach stations on the road had been abandoned
and the same exhausted beasts dragged the heavy vehicle on two stages of 14 miles each at
terrifying foot-pace. The Matabele were gathered for war only 12 miles away. At noon on Sun-
day 29th, they reached the Tati Goldfields and had 'a good dinner' with the nervy miners,
exchanging their oxen for mules and continuing with all haste. On those last stages, Theiler for
47 the first time saw the real ravages of Rinderpest, then advancing at the totally unexpected rate
of 80 to 100 miles a week.

48 Many trained observers (Selous, Melton Prior and others) recorded the overall scene and
Theiler himself, in typically laconic style. None could transmit to the visual image evoked the
heat, the stench, the suffocation nor the groans of the stricken animals. Moving northward from
49 Mafeking at the time was the Relief Column - 'All the way', wrote one of its officers, 'the road
was inches deep in dust and this, disturbed by the hoofs of 60 horses, kept everyone enveloped
in a continual cloud. When trotting, it was quite impossible to distinguish any trace of the man
immediately in front of one. Added to this was the horrible stench from the decaying carcasses
of dead oxen - victims of Rinderpest - which lined the roadside. It was a common occurrence
to see the remains of whole spans, twenty or thirty, lying about within a radius of a hundred
yards . . . The air was never entirely free from this pestilential taint. Now and again, wagons

were met – derelicts of the veld – laden with timber, furniture and cases of all kinds of merchandise, drawn up in the bush just off the road and left to look after themselves. All the trek oxen had succumbed and the transport riders had had no alternative but to abandon their loads. There was wholesale looting . . . stranded as they were with their cargoes, entirely deserted with not so much as a native in charge, is it to be wondered at that a motley crowd of men should take advantage of this opportunity? . . .’

Goods were wantonly destroyed. Luxury articles such as fine clocks were set up as shooting targets. Champagne and all forms of liquor were broached and wildly drunk. Little could be stolen. There was nothing in which to transport it. Horses and mules soon started dying from Horse Sickness. Only emaciated donkeys survived. In Rhodesia, the carrion birds disappeared.

55 Gorged on Rinderpest-infected oxen, vultures allegedly died. Farmers and transport riders were utterly ruined. A whole new class of ‘poor whites’ and tens of thousands of starving blacks burdened the administrations of every territory. The ‘all-red rail route’ to the north as well as railways elsewhere, became imperative.

51 The misery of the transport riders was heartbreaking, Theiler wrote. ‘Their wagons and oxen were all they possessed . . . Dead animals lay on the ground by the dozen and their impoverished owners stood around hopelessly. They killed the surviving animals to make biltong which is meat cut into strips and dried in the sun – an attempt to prevent approaching death from starvation.’ Shocked by the sight and stench of continental calamity, he reached Palachwe on the morning of Monday the 30th March. Otto Henning to whom he had telegraphed, awaited him. Hutcheon had been in the area only a few days before with the local Commissioner of Police, flagellating all and sundry to shoot and stop movement. Thousands of native cattle had been destroyed. An ugly atmosphere prevailed, implying a Baralong revolt similar to the disgruntled Matabele. Hutcheon was determined to keep Rinderpest out of the Cape Colony.

52 A cordon sanitaire must be imposed beyond its borders. Theiler hoped his Government was similarly guarding the Transvaal. In London, Joseph Chamberlain and Under-Secretary Selborne considered countless cables from Sir Hercules – who was to pay compensation for the tens of thousands of beasts Hutcheon was ordering shot? who would feed the starving natives? . . .

Tireless, Theiler rode into the bush with Henning to dissect Rinderpest-ridden oxen to provide material for his final report. Henning was quartered in a native hut in the King’s kraal, surrounded by a palisade of weirdly-contorted thorn-tree trunks. They chatted in German about the invincible plague and other veterinary matters. On the third day of Theiler’s stay at Palachwe the tall slender Khama in European clothes came to see them, taking ‘breakfast’ with them in his unassuming way and later leading them to his royal kraal to select beasts for experimental inoculation. He wanted Theiler to stay, especially as Newton, Commissioner for the Bechuanaland Protectorate, had arrived as his guest. In the short time since the outbreak, Khama’s people 55 were estimated to have lost 90,000 beasts. Ruin faced his country. With ‘Rinderpest raging 56 colossally’ in his own phrase. Theiler had his duties and could not accept. From Palachwe, he telegraphed confirmation to Pretoria that the plague had crossed the Transvaal border and appeared at Zeerust. He ordered the slaughtering of infected herds and payment of compensation.

57 Transport riders had therefore tried to escape to the Transvaal and had spread the disease.

On the 3rd April, he left Palachwe by coach. There were no mules or horses, only a span of infected oxen tottering under their yokes. Somehow they reached the next station and hitched a span of feeble mules, travelling day and night to reach the Crocodile River bordering on the Transvaal. Continuing along the Bechuana side, the coach reached Pala where 40 wagons were 58 stranded with all their teams dead – 720 oxen. Thence to Shoshong, capital of Secheli’s country 59 and, on the night of Sunday the 5th, Gaberones where Hutcheon and the police had shot all

60 oxen travelling south. By now, the exhausted Hutcheon had been forced to realise that the frontier of his fight had been beaten back from the Protectorate and that, to save the Cape Colony, he would have to take a new stance on the Molopo River further south.

61 As Theiler's coach lurched down the Bechuanaland border, losing a wheel here and capsizing
62 there, Kruger's landdrosts and veldcornets in the Western Transvaal telegraphed increasing infection. Finally, shaken and dead-tired, Theiler reached Mafeking, only about 200 miles from Pretoria; but in the almost complete absence of draught animals, it was quicker and better for him to travel by train hundreds of miles southward through Vryburg and Kimberley to De Aar deep in the Cape Colony and then northward through Bloemfontein to Pretoria. During all that rail journey, he was further weakened by gastro-enteritis.

63 He arrived in Pretoria on Tuesday the 7th April after only three weeks absence, most of it spent in excruciating journeys. On the same day, he was presented to a meeting of the Executive Council with the State President in the chair and for the first time, shook the old man's hand. He needed no interpreter. They spoke in 'die egte Boeretaal' on terms of intimacy. For all his
64 life, Theiler retained great admiration for Kruger. Far from being a peasant bumpkin, he grasped the gravity of the situation and the fact that Science alone could cope with it. Laconically Theiler recorded only that 'I told the gentlemen what I had seen and made my suggestions for legislative measures'. Outside the Transvaal, other terror-stricken men had further proposals.

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65 In an atmosphere taut with tension throughout South Africa in regard to the imminent trial in Pretoria of the Reform Committee for their part in the Jameson Raid, the Transvaal Government received a telegram from the Natal Government (doubtless urged by Hely-Hutchinson) seeking coöperation in combatting Rinderpest. (Natal sent similar telegrams to the other territories.) It came on the day after Theiler's return and his advice was that the Z.A.R. should indicate its anxiety to coöperate and invite a Natal veterinary surgeon to come to the Transvaal as soon as possible for collaborative discussion. Natal, so far scatheless, replied that it would send its Agricultural Secretary and Frank van der Plank (Wiltshire was about to retire) but that
66 the Cape wanted a round-table conference at Mafeking. It was duly arranged for one day – the 17th April.

Hardly recovered from his ghastly mission, Theiler was within a week reft from his family and the squealing piglets (to which Emma had added hundreds of chickens) to catch a train on the 14th April for the devious journey via Bloemfontein, De Aar, Kimberley and Vryburg to Mafeking. Already aboard were the Natal Agricultural Secretary, C. B. Lloyd and van der Plank who had come by train and coach from Pietermaritzburg. At Bloemfontein, a Volksraad member of the Orange Free State, J. C. de Waal and J. M. Beuskes joined them. The Cape
67 Minister of Agriculture, P. H. Faure (later Sir Pieter) was already in Mafeking where Hutcheon and Edington, meeting in Kimberley, joined him. Theiler was tremendously cock-a-hoop that
68 he alone represented the Transvaal – 'not without pride' he wrote his stern and doubting father, 'I was the "induna" of Oom Paul'. He was then 'a beardless boy' but soon cultivated a luxuriant imperial.

In the dusty seething dorp, crippled by Rinderpest and distraught by military forces demanding provisioning for the north, Theiler met for the first time the only colleague for whom he had real veneration. Since his advent in South Africa, he had admired the detailed descriptions of animal diseases published by Hutcheon in his Annual Reports since 1881 and in the *Cape Agricultural Journal*. Now the stocky little Swiss stood before the imposing figure of a great but tired man. Hutcheon's exertions to keep Rinderpest out of the Colony all but killed him.

69 He and Soga, going about their unpleasant business of shooting infected animals, were often as much as 48 hours in the saddle and frequently threatened with death by the incensed natives. Exhausted but undismayed, he dominated the Conference, supported by his dapper colleague Edington. Across the table in the Court House, Theiler confronted his 'great enemy' with neither warmth nor respect. Engaging in many ways, Edington was a supercilious and self-important man.

70 At the outset of the proceedings, Theiler (in the same boat as the Free State delegates) had to admit that his Government had come to no decisions regarding killing cattle, paying compensation or employing 'the stamping-out policy' nor was he authorised to pledge the Z.A.R. to any course. After asking some silly questions, he said no more. The Free State delegates were appalled by the picture painted by Faure and Hutcheon, stating that the gravity of the situation was not realised by their Government. They had nothing to contribute but a fear that, returning to Bloemfontein, they would be considered to have been 'won over'. Van der Plank spoke realistically of the excessive cost of a manned vis-à-vis fenced cordon sanitaire. Edington, pressing for inter-State coöperation, tactlessly exclaimed that while other Governments were trying to stamp out the epidemic, 'the Transvaal Government are breeding the disease on the border of their own territory'. Theiler knew it was true. At that moment, the Z.A.R. had merely issued another proclamation prohibiting the trekking of infected cattle, etc.

71 Finally, compendiously composed by Edington (who sat down the next day to write an informative account of Rinderpest for publication and general information) and seconded by van der Plank, a resolution was passed endorsing the 'stamping-out policy' and calling on all
72 Governments to coöperate, particularly in sharing costs. Hutcheon, seconded by Natal's Lloyd, successfully moved the erection of a double fence on the Transvaal border as far south as
73 necessary. Theiler telegraphed both resolutions to his Government on the following day. The Conference closed but the three professionals continued in conclave and on the 20th April
74 issued at Mafeking a statement outlining the true horror of Rinderpest, widely unappreciated, and the folly of administering linseed oil and other vaunted expedients. Hutcheon M.R.C.V.S. signed for the Cape, van der Plank M.R.C.V.S. for Natal and A. Theiler comically as C.V.S. (Chief Veterinary Surgeon) for the South African Republic.

The need for concerted preventive action was manifest. There was no talk whatever of devising an immunological means. It lay unspoken in the minds of Edington and Theiler. Edington, far south in the Cape Colony, had seen no cases of rampant Rinderpest. Theiler was ordered by his Government to inspect them in the recently-invaded Western Transvaal. Together they went from Mafeking (where the disease's southward move seemed to have stopped) to Malmani and the Zeerust district with its native locations infected by cattle driven from the Bechuanaland Protectorate. Theiler upbraided the native chiefs. Edington closely observed the cases. By cart with two horses, they drove south through the lush and lovely district abounding in tropical fruit down Jameson's route to Krugersdorp and thence by train to Pretoria where
75 Edington spent two days and on the 25th April, 'had a most satisfactory interview with His Honour the State President'. He then returned to Graham's Town where his reputation shortly received a severe rebuff.

76 On the 16th May, the Chartered Company's acting secretary sent to the Agriculture Department in Cape Town the official report of Frederick May who had been entrusted with delivering the 19 Mashonaland horses which Edington claimed to have rendered immune by inoculation with his Horse Sickness serum. Starting from Graham's Town, they had reached Mafeking in good order but once on the road to Mashonaland through the Bechuanaland Protectorate, had rapidly died. Travelling rough, only three survived, 14 of the remainder succumbing to Horse Sickness and two being shot. Edington was undeterred. It was common cause, he wrote, that the

Mashonaland strain was more virulent than the Colonial. He had been successful in 'salting' local horses and would persevere. His rival, reading his report some months later, had cause for glee.

77 Emerging from the wings of the now highly dramatic scene verging on Grand Guignol was a new member of the caste – Herbert Watkins-Pitchford M.R.C.V.S., selected in England in May by the Natal Government to succeed Wiltshire as Principal Veterinary Surgeon. In July, he began his battle against Rinderpest at the end of a corridor, screened off as an 'office', in the City Hall at Pietermaritzburg and was quickly totally involved. His equipment consisted of 'one damaged microscope, a few old dilapidated instruments and some dozen bottles containing drugs', according to his superior, the Natal Commissioner of Agriculture.

* * *

78 Severely shaken, the Z.A.R. Government now did everything possible to 'stamp out' the disease within its borders and prevent further infection from outside. Theiler wrote proclamation after proclamation for immediate issue. The State Secretary requested information from the neighbouring territories on outbreaks and advised them of the Transvaal's. On the 28th April 79 1896, Kruger set his hand to a lengthy Proclamation constituting Rinderpest committees in each ward of the Transvaal. Its second provision compelled the chairman of each committee to come to Pretoria for briefing by the 'Gouvernements-veearts' – the Government Veterinary Surgeon. There was no such official. Theiler had opened his own door. The moment the Proclamation was gazetted in the *Staatscourant*, he wrote to the State Secretary on the 30th April 80 applying for the appointment. His letter rattled round the secretariat in customary procrastination and on the 5th May, the Under-Secretary T. J. Krogh formally offered him appointment at £500 a year with travelling expenses, demanding an immediate answer. Theiler replied 81 on the same day that, provided the Government supplied offices and amenities appropriate to the post, he was prepared to accept it at any time. On the 11th May, the Executive Council 82 authorised his appointment as 'Gouvernements-veearts'.

83 He was given an office in the Government Building in Church Square and there he received the bearded Boers from every quarter of the Transvaal who had been chosen by their peers as heads of the many Rinderpest committees. Now he grew his own beard even longer to match their's and in his gregarious way, was soon on easy terms with them even unto the 'Oom-neef' relationship. Every morning he rode on his pony from Les Marais to town and, pending the full operation of the last Proclamation which would bring him endless visitors, he addressed the 84 Pretoria Agricultural Society; read the newspaper accounts of Kruger's opening the Volksraad with mention of the new Rinderpest regulations, later hotly debated but accepted; noted outbreaks all over the Transvaal and in Natal; and drafted an official pamphlet. His frightening 'The 85 Rinderpest – Its History, Symptoms, etc' was submitted on the 16th May and immediately printed in 2,000 copies to alert the Boers, courtesy copies being sent to the neighbouring territories. It was Theiler's first publication as Gouvernements-veearts and he proudly sent a copy 86 to his family. He continued drafting endless proclamations. In the evening, he would ride home, have his supper, read scientific journals and go to bed. Emma ran the entire small-holding – pigs, chickens and native labour – looked after the lively Hans and prepared for the next arrival 87 only a few weeks thence. Over the weekends, she helped Arnold in his 'well-equipped laboratory' where he pursued his investigations into Horse Sickness, Redwater and other diseases. With mis- 88 begotten enthusiasm, he described his existence as 'idyllic'.

The Jameson Raid trial over and the prisoners' sentences variously commuted, the Z.A.R. Government devoted itself to defending the Transvaal against manifest menaces without and

89 within. The malice of Britain would be met by seven hill-top forts to be built around Pretoria (and one in Johannesburg); the Staatsartillerie would be expanded and extensive buildings and stables provided for it; heavy and light armaments of every kind would be imported; and the Secret Service would be improved and extended. There was as yet no overt sign of Britain's belligerent intention but evidence daily increased of the murderous force within. Rinderpest raged uncontrolled throughout the Transvaal, paralysing its economy and breaking the spirit of its people. It was now that the Boer War was lost.

90 Draconian laws were inflicted. The terrible example of Bechuanaland lay alongside. 'No cattle whatever exist in the Protectorate', the officer commanding the police reported. Kruger knew that his own country was well on the same way. Animal traffic was prohibited and wholesale destruction (with minimal compensation) of infected beasts was ordered. High penalties for contravention were enacted. The farming communities were totally isolated and robbed of all income. Unable to bring their produce to market, they soon starved. Before long, there was not
91 an animal to bring it anyway and the Government voted unprecedented sums to pay speculators offering to import mules and donkeys from Spain and South America. Distress among whites and blacks in the Northern Transvaal quickly became acute. To prevent escalating deaths from starvation, the Government supplied mealies – at a price – in an attempt to force the natives to leave their tribal lands to work on the mines for cash. The natives, like the Afrikaners, despised work with their hands. Only the possession of cattle dignified a man. Both were accounted lazy – neither were. Their mores were more powerful than their needs. When their animals died,
92 both starved on their lands, committed incest because they could not move, deteriorated morally and physically, and broke the backbone of the nation.

Nothing stopped the Rinderpest. Theiler continued drafting proclamations, but with no staff to support him and incredulous, even recalcitrant Rinderpest committee chairmen to hamper him, could achieve no amelioration. Much was done surreptitiously. Stock-owners secretly
93 'salted' their remaining beasts by inoculating them with the blood or other fluids from Rinderpest victims – sometimes with apparent success but of doubtful duration. Others vaunted
94 'cures' and preventives (including Mr William Cooper and Nephew who publicly claimed that their powder containing sulphur and arsenic 'killed germs and will absolutely prevent Rinderpest'). Hutcheon – now supported by another Scotsman, William Robertson M.R.C.V.S. with
95 experience at the Paris Pasteur Institute and therefore drafted to Edington, as well as a posse
96 of English veterinary surgeons – listed some of the 'cures' which he was forced to test: linseed oil; salt and paraffin in combination; permanganate potassium; boiling a sick ox and dosing with the soup; quinine; sulphate of copper; and 'secret remedies' for which the proponents expected reward. Many emanated from the highest administrative authority.

97 Nothing helped. 'Days of Humiliation' were solemnly observed as the tortured Transvaal groaned under drought, locusts and Rinderpest. Cattle were dying in thousands in the native
98 reserves while Theiler, like Hutcheon, wasted his time testing 'cures'. 15,000 cattle were stated to have died in the Waterberg district and 2,000 corpses lay in the veld around Rustenburg.
99 The Government was spending £30,000 on buying mules to maintain transport and obviate starvation. The awful realisation began to spread that Rinderpest 'was gaining the upper hand'
100 and that even if it were checked, the infected land, according to Cammack and others, would
101 take at least a year to recover. Imported stock to replace losses would be particularly vulnerable.

Now a civil servant with fixed hours, Theiler made good use of his free time with Emma in his Horse Sickness experiments. Like Edington, he believed he had isolated the causative
102 bacterium and succeeded in propagating it in culture, even reproducing the disease with it in two cases. He hoped soon to be able to produce a preventive inoculation; but his official duties removed him. He had offered to test the many vaunted 'remedies' at Makapanspoort in the

103 afflicted Waterberg district. Checking with the Nylstroom landdrost, the Secretariat was informed of a profusion of cases on tribal lands. In the Waterberg, it was reported, 'the disease is raging more fiercely than in any other district in the Republic'. It was his duty to go there to put the 'soups' and potions to the test.

104 The Government provided him with a huge and cumbersome covered wagon drawn by 10 precious mules. He loaded it with chaff and mealies for the mules; pots, pans, groceries, tinned meats and bedding for himself; his microscope and a selection of pharmaceuticals, disinfectants, 50 gallons of linseed oil and other paraphernalia recommended by quacks. He took his gun and camera and on the 20th June 1896, set off for Nylstroom and the Rinderpest-infected tribal area for an anticipated two-month stint. Emma, now near her time, remained to continue the Horse Sickness experiments and conduct their livestock enterprises.

105 With no heart for his work, Theiler applied all the fraudulent 'remedies' to cattle in the native kraals, at first regarded with suspicion and later with understanding by their owners. None was effective and ultimately they objected to 'doctoring', hoping that some at least of their animals might by chance escape. Theiler himself described his uncongenial task as a six-week hunting holiday and longed to return to his burdened and over-worked wife.

106 The ghastly certainty of a catastrophic pandemic now gripped the whole of South Africa. Hutcheon had been unable to check the disease by river or fence. It crossed all borders in a variety of ways, including 'the low Vaalpanse' as Soga called residual Bushmen (the Bakalahari) - 'human vultures' who by instinct found dead animals and bore off infected meat in all directions. Watering places where sound and infected beasts congregated to drink were fecund sources of distributed infection. Van der Plank (whose career soon ended in October 1897 in a lingering death from the bite of a puffadder) had confirmed an outbreak at Harrismith on the borders of Natal and thrown his Government into feverish exclusive measures of fencing, policing and 107 blowing up the passes across the Drakensberg giving access to Natal. Infected cattle were still driven secretly.

Belatedly Natal reorganised its Agricultural Department. On the 1st July, Herbert Watkins-Pitchford, fresh from Sandhurst in England, was appointed Principal Veterinary Surgeon without any staff, premises or facilities whatever, and instructed to combat the advancing plague. His immediate response was to demand at least four veterinary surgeons and an opportunity to 108 study the disease. By the middle of July, commended by his Government, he was in Pretoria where the Secretariat gave him a letter of introduction to the landdrost of the Waterberg, requesting all facilities so that he might place himself under Theiler's tutelage. He saw Rinderpest at its worst with cattle and antelopes dying in droves and the landdrost advising the Government to erect a fence to protect Pretoria. All three returned by coach to Pretoria on the 30th July. 109 Theiler, in heartless disregard of his wife's condition, immediately sped to Johannesburg for the National Day celebrations of the Schweizerverein Helvetia, leaving the following day for Secocoeniland in the east on the same bootless errand of testing 'cures' and trying to stop infection by natives. 110

He was away for 12 days, familiarising himself with the country, the natives and the Boers, and the folly of quacks in trying to combat a pandemic already widespread in the Transvaal and threatening to leap the borders of Natal and the Free State. Slaughter was the only possible 111 policy though Theiler secretly believed that Rinderpest would rage its way to the sea. During his absence, the heavily enceinte Emma pursued her multitudinous tasks, even in the laboratory 112 and in observations of the experimental animals outside. 'Technically', wrote Arnold to his parents, 'Emma takes my place in all my research work with pleasure and interest'. He came back from Secocoeniland on the 14th August to find that 'unbelievably but verily during my absence, she did a postmortem on a horse which I had inoculated with Horse Sickness and

collected blood and other virus in a way which I could not myself do better.' A week later, she gave birth to the desired daughter, immediately called Margherita to match the son – Hansel and Gretel or Gritli.

114 At last financially secure with a fixed salary and some saving from his reimbursement for travelling expenses, Theiler seemed near to solving the Horse Sickness problem, now doubly important through the continuous decrease in draught animals. At that moment – August 1896 – pictures appeared in local newspapers of the 'Horseless Carriage' (a Benz 'Velo') imported by the Pretoria firm of J. P. Hess & Co. which announced its arrival from Germany by ship unloading at Port Elizabeth. 'Fancy driving about in your carriage', wrote *The Press* in its caption, 'and not requiring horse, harness or groom and no forage bill at the end of the month! Let alone no trouble regarding the dreaded Horse Sickness.' When the comic machine reached Pretoria, Kruger inspected it closely but refused to ride in the noisy contraption. By then (early January 1897), the Rinderpest situation had greatly worsened. The State President and his entourage appreciated what the machine could mean to the Transvaal whose urgently-commissioned railways were crawling at a painfully slow rate of construction toward the ruined northern districts. He caused a special medal to be struck, inscribed in Dutch – 'presented to Mr J. P. Hess in commemoration of his introduction of the first Motor Car (De Eerste Motor-Kar) in South Africa'. The new era took long to develop. Steam, for every purpose, seemed to Oom Paul more practicable than petrol.

115 It was now obvious that all the proclamations and prohibitions and double-fencing has failed to stop the spread of Rinderpest infection. Natal and the Free State clung tenaciously to their barriers but it was only a question of time before they were penetrated. Hutcheon's were increasingly breached and he called for more inter-State coöperation to save the Cape. As Theiler returned from Secocoeniland, the Cape Colony invited the Z.A.R. Government to another Rinderpest Conference. Kruger called a special meeting of chairmen of all the Rinderpest committees throughout the land to hear their views and universalise their procedures. It resolved inter alia that they be authorised in their areas to employ poor whites at 6s. a day to construct emergency fences of bush until the long-awaited wire came from overseas. Then the Government appointed its delegates – T. J. Krogh, the Under-State Secretary; A. Theiler, Government Veterinary Surgeon; and Douw du Plessis, Veld Cornet for Rustenburg where Rinderpest raged. They left by roundabout train for Vryburg on the 28th August 1896.

116 This time, Theiler was not 'Oom Paul's induna'. Krogh fulfilled that rôle, ably supported by the experienced and articulate du Plessis. Theiler hardly spoke during the two-day conference opening on the 31st August. Fully representative, it was of the highest significance and altered the course of event. From the Cape came Pieter Faure, Hutcheon and R. Crosbie M.L.A.; from Natal, Lloyd and Watkins-Pitchford; from the Free State, J. C. de Waal and C. H. Wessels both members of the disbelieving but now alarmed Volksraad; from the ruined Bechuanaland Protectorate, its Resident Commissioner Newton (later Sir Francis); and from the Basutoland Protectorate, its Acting Resident Commissioner Lagden (later Sir Godfrey). The most potent delegate came on on the second day – the Imperial German Consul-General in Cape Town, Baron von Schuckmann. Speaking only to an enquiry as to what his Government was doing in German South West Africa, von Schuckmann described the effective 'stamping out' policy pursued in Germany after three infections from Russia and promised coöperation in the present instance. He was to be the means of its ultimate supposed solution.

117 The Vryburg Conference, inevitably dominated by Hutcheon, occupied itself chiefly with means of combatting the leaping infection. Mobile domestic and wild animals could still be contained by fences; but persons, particularly natives, would have compulsorily to be disinfected.

118 There emerged the horrifying fact that 'vengeance infection' was practised on tribal and other

lands by natives and whites having a grievance against their chiefs or employers or neighbours. Further, much infection was conveyed by hides and skins, wool, biltong and other animal products. Stringent disinfection regulations were resolved.

119 Almost as an afterthought, the Conference considered 'cures' and dealing with the disease at source. Hutcheon spoke at length on 'quack remedies', followed by Theiler in the richness of his recent experience. Previously silent, Watkins-Pitchford exclaimed - 'I think all the time spent in administering medicine internally for Rinderpest is not only wasted but very badly spent, the only possible hope of a remedy being in the serum treatment. I do not think any drug would check the disease when the organism is in the blood multiplying there while you are only acting on the alimentary canal.' The desultory discussion was construed as adequate to resolving finally 'that it would be of great public advantage if a series of experiments could be carried out in South Africa on the subject of Rinderpest, especially with reference to the length of time that the infection would remain on an infected farm'.

For the first time, Africa South united to combat a common crisis.