

UNION . . . AND A SWARM OF GADFLIES 1909-1912

AS THE COLONIAL empires approached their zenith throughout the world, South Africa (ignoring Rhodesia) moved toward unified participation in the British Raj. Regardless of the depressed and penurious state of most of its citizens, the whole country allowed itself to become intoxicated by a vague idea. 'Union' would solve everything. By the wave of a wand, the local and overseas politicians would cause all problems to evaporate. Only the bureaucrats understood what perils it implied.

1 F. B. Smith returning from his overseas survey on the 1st March 1909, had already made his
 2 plans, strongly influenced by the federal U.S.A. 'Bureau' system (the Bureau of Animal Hus-
 3 bandry, the Bureau of Plant Industry, etc.) 'My Institute will also be involved in them', Theiler
 wrote excitedly to Alfred in May, 'it may well become the Central Institute for the whole of
 South Africa. That means that there will be Reorganisation which I must plan and continually
 carry out. I cannot and dare not stay away during the next winter.' Hardly had he left than
 A. G. Robertson moved in the obsolescent Transvaal Legislative Council that he be given a
 special grant or bonus in view of 'the thousands and thousands of pounds he has saved the
 Transvaal farmers', his annual salary of £1,200 being inadequate (though now enhanced by
 free use of his modern house, light and fuel). Johann Rissik, Minister of Lands, cannily agreed
 to refer it to the Prime Minister.

For such trifles, Botha had neither time nor opportunity. He was in England negotiating the
 final phase of unification which, passing through both Lords and Commons as the 'South
 Africa Act of Union', was formally given Royal Assent in September 1909. Lionised as usual,
 4 Botha refused a peerage but 14 of the 33 delegates to the National Convention accepted knight-
 hoods. Honours were lavishly bestowed on men prominent in any field of the new adult member
 of the Empire. Exhausted and plagued by his chronic 'Indigestion', 'influenza', swollen legs
 and excessive weight, Botha submitted to examination by the King's physician, subsequently
 5 Lord Dawson of Penn, and was consigned to Kissingen for a Kur while his country, wracked
 by confusion and insecurity, continued to grovel in poverty with its inevitable concomitants of
 violence, murder and suicide. Many months were to pass before the wand was waved and no
 miracle was wrought. Only the tense atmosphere of expectation and insecurity remained.

Theiler intended to miss nothing in the new 'reconstruction' while making the most of his
 absence in serving his future purposes. The glory of his possible future rôle in the new country
 did not exclude him from present personal troubles. Marie was in difficulty with a husband
 who, whatever his merits, was not a good provider. Hans too might be a problem. He did well
 at the Pretoria Boys High School but, the headmaster said, would do better if he took an extra
 year before matriculating. Arnold's salary would have further to be stretched. The girls worked
 solidly and well at the Pretoria Girls High School, both enthusiastic and proficient at outdoor
 sports appropriate to naturmenschen. Many years must pass before the diminutive Max could
 complete his education at equally expensive schools and colleges. Provision must be found for
 all. Emma, shrewd and thrifty, kept expenses down without loss of status. She would not waver
 when future demands stretched their resources even more. Arnold made it clear to her that his
 6 intention to study abroad remained - 'my plan must be postponed for one or two years but
 pursue it I must and will', he wrote Alfred.

7 The importance of the agricultural economy impressed all the colonial powers. F. B. Smith
 had already become the proud by unwilling victim of a steadily increasing 'brain drain'. His

deputy, A. C. Macdonald had become Director of Agriculture in British East Africa based at Nairobi. One of his best vets, P. Conacher, was now Principal Veterinary Officer of Portuguese East Africa where his entomologist, C. W. Howard, had also gone. One of his botanists had gone to Southern Rhodesia and other experts elsewhere. If 'Union' did not bring improvement in their conditions of employment, there would be other defections, perhaps even the pearl among his specially-trained staff – Theiler himself, now dangerously summoned by the great Bruce and later voyaging to an International Conference full of beguiling invitations.

Typically equipped in tropical whites and a monstrous red-lined terai, Theiler was travelling up the east Coast where the Deutsch-Ost-Afrika Linie steamships, moving mostly at night, touched at every outlet – Lourenço Marques, Beira, Mocambique, Port Amelia, Dar-es-Salaam, Zanzibar, Mombasa – taking aboard the skeletal victims of malaria and black-water fever to die in their native lands. At Dar-es-Salaam, Theiler called on the Principal Veterinary Officer, Dr G. Lichtenheld and, chatting happily about common interests, found that he would be company for Emma on the ship six weeks hence when all three would continue to Europe. Lichtenheld had much to tell him about tropical animal diseases, especially East Coast Fever.

He landed at Mombasa in a welcoming atmosphere and took the train across the Athi Plains to Nairobi where the P.V.O. Robert Stordy and R. E. Montgomery, recently appointed Veterinary Bacteriologist for British East Africa, met him as friends. They had plans to make use of him when he had finished with Bruce in Uganda. Stordy placed himself at Theiler's disposal, showed him everything he could, answered all his questions and put him up. East Africa was an exciting experience – the strange and varied natives, the profusion of wild animals, the odd cattle (long-horned Angoni and dewlapped Asian), the dull grey-stone British Colonial buildings with their fresh-faced officials struggling to help dashing settlers (many remittance men), and the heroic scenery of the Great Rift Valley with its distant peaks. Theiler went on by train to Port Florence (Kisumu) on the shores of Victoria Nyanza and thence by boat to Entebbe where a genuine safari took him by rough track to Bruce's well-developed camp at Mpumu on the northern shore.

Some degree of emotion inhered in the meeting of the tall corpulent Bruce and the stocky Theiler, both bullet-headed and imposing. Theiler had been abroad when Bruce visited South Africa in 1905 and their continuing correspondence had been but a dull reflection of the relationship which sparked into vivid life upon meeting. Bacteriology was their common field and if Theiler seldom touched on the human aspect, confining himself to domestic animals, Bruce worked in both. They hastened to bring each other up to date.

In his Nagana work, Bruce had established the vitally important fact that unaffected animals could serve as reservoirs for deadly virus transmissible by flies. The killer-trypanosome could lurk harmlessly in game until a tsetse fly absorbed and transmitted it by biting domestic cattle. In 1903/04, Bruce had been sent by the Royal Society to Uganda to join an investigation of Sleeping Sickness, then depopulating the lake area. Its human victims provided research material and one of the investigators, sure that he had found the cause in a bacterium in the brain of dead patients, casually told Bruce that he had noticed *Trypanosoma gambiense* (already identified in West Africa) in the blood of some. 'Like a flash of lightning', Bruce told Theiler, 'it went through my brain that this parasite must be the cause of Sleeping Sickness and nothing else, and that if such were the case, then it must be transmitted by a fly.' Now he was experimenting with scores of monkeys, each chained to its elevated box-house as shelter from Uganda's torrential storms, in regular rows outside his Mpumo laboratory. Theiler eyed them appreciatively. He had come to advise on his own 'trypanosome', transmitted by ticks.

Contrarily the examples of Amakebe (endemic in calves and distinguished by heavily-swollen lymphatic glands, emaciation and a 50/75% mortality) which Bruce had available were mostly

10 recovered cases. To obtain freshly-infected calves, he and Theiler journeyed to the glamorous native capital Kampala whose grass-fenced and – woven Lukiko or Parliament was ruled by the Katikiro, Sir Apolo Kagwa K.C.M.G. (prime minister). Bruce was a big man but alongside Kagwa, cut no figure while the stocky Theiler at an alleged 5 foot 8, appeared a pygmy. A huge short-necked square-headed and toweringly impressive African whose stern expression could break into a smile stretching a neatly-trimmed moustache, Sir Apolo in his long kanzu and embroidered cotton kofia was a dominating figure (doubly impressive in State robes), ‘rejoicing’, it was said, ‘in the great power he wielded’.

11 Theiler had met the saintly Khama of Bechuanaland; but this African potentate, devout Protestant though he were, was a man of different stamp whose private life was far from immaculate. He had fought for his people and thrown in his lot with the British when Uganda had fallen by agreement into their sphere of influence. With no schooling, he was nonetheless a proponent of higher education. He had left his country only once when he went to England in 1902 to attend King Edward’s coronation, receiving the K.C.M.G. soon after. Of his intelligence and administrative ability, there was no doubt (he was ‘prime minister’ for 35 years) and there was much congenial discussion between the three men of like age. Sir Apolo had known Lugard and Johnston and recounted to Theiler the terrible devastation of the Rinderpest in the early nineties when cattle, buffalo, antelope and other game died in large number. They were dying from it now only a few hundred miles further north and in 1907/08, it had ravaged the animals of eastern Kenya. Africa, Sir Apolo knew, would stand or fall by what was done about its stock diseases. Upon their request, he provided Bruce and Theiler with fresh cases of Amakebe which they took back to their station.

12 Observed with customary interest by Lady Bruce (steadfastly attired in Edwardian dress and huge hats), they began their microscopic examination. They found in the calves’ blood the usual piroplasmas of tick-borne diseases but Theiler drew attention to almost invisible dots in the red corpuscles which he called ‘marginal points’. A mystifying number of potentially lethal micro-organisms could be found in any animal’s blood, Bruce emphasised in his subsequent report to the Royal Society; but Amakebe must be East Coast Fever because among them were ‘Koch’s granules’ or ‘blue bodies’ found in the spleen and other organs. ‘The diagnosis of East Coast Fever was made in South Africa if such bodies are found.’

13 Theiler essayed empiric proof by arranging with the Uganda Veterinary Officer, E. Hutchins, to send to Onderstepoort specimens of the culpable brown tick (*Rhipicephalus appendiculatus*) which abounded in the Protectorate. Arriving in good order, they were placed on calves which 14 died of East Coast Fever in two or three weeks. Both Bruce and Theiler reported it fully to their sponsors. Their happy association (involving a good deal of sight-seeing as well as discussion) had come too soon to an end. Early in August, Theiler went down to Nairobi where Sturdy had arranged to demonstrate a variety of East African cattle diseases common, Theiler found, to sub-tropical Africa. They performed many postmortems together and held discussions (including Montgomery) of great mutual advantage. Sturdy also arranged a meeting with Kenya farmers. Theiler gave them a comprehensive address on African stock diseases (subsequently 15 published in the *Agricultural Journal of British East Africa*). ‘I have recently come to the conclusion’, he said, ‘that Gall-Sickness, hitherto regarded as a sequel to Redwater, is due to the presence of another parasite which I have called “Marginal Points” owing to their position in the red corpuscles. Gall-Sickness is therefore a separate and distinct disease.’ He thought it was transmitted by the blue tick and the hypothesis long occupied him.

16 A scoffer at all non-scientific theory, particularly religious (‘at the beginning was protoplasm’, he would say of the Creation), Theiler later admitted to a strange feeling of disquiet in Uganda. 17 His mother had died and while never conceding an extra-sensory perception, he had been aware

of it long before the news reached him. When he joined Emma on the ship at Mombasa toward the middle of August, their plans would have to be changed – they would have to go straight to Switzerland, omitting the intended visits to Toulouse and Paris. From his discussions with Bruce, Stordy, the resident veterinary surgeons and particularly the East African farmers (Theiler always acknowledged the help of farmers), he had gained an impressive view of Africa's common stock disease problems and their worldwide menace. Now Lichtenheld, aboard the ship for two weeks, gave further details, mostly relating to East Coast Fever. Emma brought bad news. The whole Cape Colony and particularly the Transkei with its uncontrolled movement of native cattle, was menaced by outbreak. The ancient precautions of patrolled fences, cordons, prohibited movement and a host of regulations had been invoked. Theiler had been unable to reproduce the disease artificially and thereby evolve a vaccine. There was little to stop it except Watkins-Pitchford's new and revolutionary technique of dipping every three days. The cattle neither died nor were poisoned nor impregnated by arsenic but it was a great nuisance. Joseph Baynes practised it enthusiastically and successfully, loudly lauding its effectiveness.

The clouds on Theiler's now vastly extended horizon served to warn him further of the gaps in his professional training and private study. It was not enough to employ experts in a multi-disciplined approach – one had to know what they were doing and the quality of their work. He had wanted to study zoology and parasitology with special emphasis on helminthology because of the infestation of sheep, horses and stock generally by worms and other parasites. Now, with Lamziekte, Stijfziekte and supposedly allied diseases, plants came into the picture and with plants, pasturage; and with pasturage, the chemical constitution of the soil; and with soil, mineralogy and geology. When the family discussions were over in Switzerland, Arnold attacked Alfred. In the course of his European tour, he would engage more experts on Botha's authority but he himself must make an assault on soil chemistry, mineralogy and geology. Alfred must select suitable literature for him to study. Then he dashed off with Emma to Holland.

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The Congress was held, not at The Hague itself but in the Kurhaus and Palace Hotel at Scheveningen, the neighbouring seaside resort. 'Theiler of Pretoria' was immediately prominent. He had been appointed president of Section V dealing with tropical diseases. Sir John M'Fadyen, leading a slightly improved delegation of 50 English ladies and gentlemen, was appointed a President of Honour and Stewart Stockman a Vice-President of Honour. Like Theiler, their wives were with them but his friend A. E. Mettam of Ireland and Frederick Hobday of London came unaccompanied. There were about 800 delegates including the renowned Bang of Copenhagen, Hutyra of Buda-Pesth, Ostertag of Berlin, Arloing of Paris, Perroncito of Turin, Dschunkowsky of Russia, Ligni eres of Buenos Aires, Leclainche of Toulouse, Theiler's Onderstepoort pupil Dr Knuth of Berlin and many newcomers from all parts of the world including in Theiler's section, Professor J. A. Gilruth of Auckland who gave a paper on 'The control of animals in health and disease in New Zealand'. The total attendance of the Congress was about 1,500 and infinite diversion had been arranged for them despite the usual language difficulties.

In opening the proceedings, the Royal Consort Prince Hendrik of the Netherlands – whose wife, Queen Wilhemina (she had taken Kruger from Louren o Marques to Holland in her cruiser *Gelderland*), had thrown Pretoria into transports of Dutch fervour and flaunting of the colours of the House of Orange by the birth of a daughter Juliana in May – delivered his address in French, German and English, rivalling Theiler himself who later translated as usual. Many delegates had difficulty in understanding the 146 papers. The agenda inevitably was grossly overloaded; but despite the heavy European influence on the proceedings, Theiler's Section V

on Thursday the 16th September with Sir John M'Fadyean in the chair, was particularly eminent. There were seven papers. Knuth spoke on 'Prophylaxis and Pathology of Protozoan Diseases' and Theiler gave a then highly innovative lecture on 'The Prophylaxis of Tropical and Sub-Tropical Diseases of Domestic Stock'. Moving away from the microscope, he inculcated flies and ticks and, to the surprise of many delegates, urged the elimination of intermediary hosts.

23 The morning held drama. The widely-respected Dschunkowsky, speaking to 'Transcaucasian Tropical Piroplasmosis' which he demonstrated with microscopic slides, described a tick-conveyed cattle disease which Theiler was confident was East Coast Fever. But Dschunkowsky said it was inoculable with infected blood and he failed to explain 'Koch's granules' in his protozoan samples. Theiler believed that the disease he conveyed by inoculation was something other and that the same fundamental micro-organism caused Cattle Fever in the Transcaucasus and Africa. He could all but prove his point; but the real importance lay in the Congress' readily agreeing to recommend the foundation of an International Bureau of Tropical Diseases. In one bound, he had become a truly world-wide figure. In knowledge and stature, he had made a forceful personal impression resounding through the corridors of bacteriological research and enabling him to concert its efforts throughout the world. Other resolutions, all consonant with those of the Pretoria Pan-African Conference in January, were passed by the Congress (which resolved to hold its 10th meeting in London in August 1914); but none had equal global importance nor owed their acceptance to the expertise and drive of a single man outside the hallowed European circle.

24 When the English delegates returned after a series of post-Congress tours organised by the Dutch authorities, they had much to say about Theiler's contributions. 'Appreciative comment appeared yesterday (24th September) in the London Press', Reuter somewhat bemusedly reported, 'with regard to the series of lectures which Dr Theiler, the Transvaal Bacteriologist, has given in Holland on the subject of diseases of South African stock. Dr Theiler has agreed to give several lectures to a number of learned societies in England.' Upon his return at the end of 1910, Theiler consolidated the impressions gained on his 'paid leave' (possibly to account to his Government) in masterly 'Notes on Stock Diseases of German and British East Africa Uganda, and the Resolutions of the International Veterinary Congress at The Hague, Holland 1909' but for the moment, he was travelling in Europe in search of the men and equipment needed to convert Onderstepoort to the service of the Union of South Africa.

25 His progress was royal. He visited his friends at the Institut Pasteur in Paris - F. E. P. Mesnil and Edmond Sargent of the Algiers branch - and his closer colleagues in Switzerland. In 26 Zurich, a civil engineer employed by the Emperor Menelik of Abyssinia sought him out to enquire how the Rinderpest epidemic there might be controlled. Alarmed after all that Sir Apolo had told him that it might again spread through Africa, Theiler promised assistance if a genuine attempt were made. In Berlin, Knuth welcomed him and in Hamburg, he called at the 27 Institut für Tropen und Schiffs Hygiene and made a deal with its director, Professor Nocht. If Nocht would lend him a protozoologist to investigate East Coast Fever (whose causative organism had been further fogged by Dschunkowsky), he would give him all assistance in studying other tropical diseases. Nocht lent him Dr Richard Gonder who soon arrived in Pretoria. 28 As Frei's contract as bacteriologist expired in October, Theiler also recruited Dr Hans Sieber to replace him. Gathering information and current views on parasites, intermediary hosts and protozoa all the way, Theiler finally crossed the Channel into the welcoming arms of old friends, particularly Stockman.

29 Their joint experiments on immunising cattle against Redwater would continue despite the happy discovery of G. H. Nuttall of Cambridge (an authority on ticks to whom Theiler had sent specimens) and Dr Hadwen of Canada that an injection of the stain Trypan Blue effected a

30 cure, an event hailed almost throughout the world. Theiler, now distinctly an important servant of the British Empire, went diligently about his business of preparing himself and his Institute for wide and heavy responsibility in the forthcoming new order. The old bogys would not disappear, among them Horse Sickness. He had always believed it was caused by a fly, probably a variety of mosquito. Now he approached F. E. Theobald, a zoologist and vice-principal (as F. B. Smith had been) of the South Eastern Agricultural College at Wye, who was a specialist on mosquitoes and to whom Simpson had sent specimens on Transvaal types. Theiler offered to send him an extensive collection from Onderstepoort and environs where Horse Sickness was always rife, for identification and classification. He began it immediately upon his return and continued until 1910, collecting at random and also from traps in horse-stables where the insects might conceivably have been feeding on the animals. Theobald carefully classified them, suspecting an even wider mosquito population in the Transvaal but the identification of the specific Sickness carrier remained elusive.

31 For the whole of October 1909, Theiler sounded the level of research and the availability of assistants among his peers in England. They had bright young men whom they could recommend and Theiler made tentative arrangements pending the authorisation of increases in his establishment. His eye was on D. T. Mitchell and W. Horner Andrews in London, both able investigators. He had also checked the progress made by the first South African students whom Botha's bursaries had enabled to study Veterinary Science at the Royal College in London and elsewhere. The earliest, P. R. Viljoen was doing exceptionally well at the R.C.V.S., later passing his second Examination with First Class Honours. The two students who had followed him, Gilles de Kock and G. F. Marais managed their first Examination with Second-class Honours. Theiler was pleased at the promising prospect of indigenous assistance, all of it Dutch-speaking. Then he crossed the Bristol Channel to visit Professor A. E. Mettam, principal of the Royal Veterinary College of Dublin. Mettam had a likely candidate in Daniel Kehoe who had graduated with distinction and joined his staff. Theiler engaged him forthwith as an Assistant for serological work and Kehoe sailed in September 1910. In the meantime, D. T. Mitchell was brought out for appointment to the Veterinary Division and transferred thence to Onderstepoort in June 1910.

32 His work worthily done, Theiler embarked at Dover on the 3rd November on an 'intermediate' or slower steamship than the mails for reasons of economy. Vile weather impended, later littering the English coast with wrecks; but after a first frigid week, the voyage was 'extraordinarily pleasant'. Both Arnold and Emma needed the recuperation after eight frenzied weeks abroad and facing a future clouded by confusion and uncertainty. On the 29th November, the eager faces of their children and staff confronted them on Pretoria station. Life at Onderstepoort was quickly resumed. Disillusion soon laid its damp hand on every aspect.

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34 Botha was back, thinner and better in health. The whole country had been dismayed by the mooted appointment of the undistinguished Mr Herbert Gladstone, then Home Secretary ('Asquith will be glad to get rid of him', the papers reported, some pleading for the retention of Lord Selborne) as Governor-General of the forthcoming Union. The King formally proclaimed the 31st May 1910 as the date of inauguration of the new constitution and on the 22nd December 1909, Gladstone's appointment, approved by Botha, was formally confirmed. Slowly the glorious event was diminishing in stature. The fine figures of the past departed – first, Hely-Hutchinson, valued and esteemed by Theiler, and last, on the verge of the new order, Lord Selborne himself, his sponsor and supporter. Pathetically people continued to believe that the

poverty, insecurity, violence and confusion would disappear with one wave of the wand of Union. It was a testing time for men of moral integrity and courage. Theiler was tried more than most.

35 Unlike his colleagues, the pattern of his future had been pre-ordained. Licence had been given him to reorganise his Institute and prepare himself to be the Chief Veterinary Research Officer of the Union of South Africa. While the four colonial civil services suffered from a pervasive feeling of insecurity – ‘everyone’s job is in the melting pot’ – Theiler could be reasonably confident that he would remain in charge of an expanding function. ‘Not the least valuable item in the dowry which the Transvaal will carry into the Union’, noted a local newspaper appreciatively, ‘is the Onderstepoort Laboratory’. It had its own difficulties regardless of the impending adjustment to national level.

The size and activities of Theiler’s staff inevitably conducted to personnel problems. The Institute was as a monument to his own evolution and in administering it, he naturally ‘liked doing things his own way’ (as his men put it) and with his own rigorous standards. During his five months’ absence, the tasks he had set had been satisfactorily accomplished with two exceptions.

36 Frei, whose knowledge seemed limited, had returned to Switzerland in October without Theiler’s making any move toward renewing his contract (after some months study in Berlin, he became Professor of Veterinary Science at Zurich University). He had expressed himself disloyally to the staff and worse had occurred in the case of Karl F. Meyer, also Swiss, who had

37 pursued his assignment, not in accordance with Theiler’s direction but in conformity with his own ideas. He had further written ‘disloyally’ to his family whom Theiler had met in Switzerland and similarly indulged his feelings at Onderstepoort. Admitting that Meyer was ‘indubitably a really able man’, Theiler resented his attacking the problem of ‘Koch’s granules’ in relation to East Coast Fever in his own way and expected him to conform to his superior’s direction. Personal relations deteriorated steeply between them until they ceased to be on speaking terms. Meyer left for Pennsylvania at the end of May 1910, his name and his work reviled by Theiler who was ultimately forced to admit that his investigation into the pathogenesis of East Coast Fever had been sound and correct. (Meyer subsequently became a well-known veterinary scientist in Canada and the U.S.A.) The contretemps had been both unpleasant and disillusioning. Less distressing was the resignation of the zoologist, L. H. Gough, on sick leave in Basle, who was replaced by W. H. Andrews.

Among so large a staff as now obtained at Onderstepoort, there was bound to be some incidence of ‘domestic politics’, jockeying for promotion and, men being men, malicious gossip. Theiler talked emotionally of ‘the Onderstepoort spirit’ and it was indeed the measure of his leadership that he could conjure wholehearted coöperation from the most recalcitrant material. The ‘failure’ of his Swiss recruits baffled and hurt him. In pioneering days, his compatriots had served him well when, *faute de mieux*, he had engaged them as lay assistants and trained them as laboratory workers. Now he could employ English-speaking men and soon there would be qualified South Africans. Years passed before he again engaged Swiss; but his drive toward maximum effort from every member of his staff never dwindled nor failed in effect. In time, little men accused him of authoritarianism, of grasping honours for himself earned by them, of putting his name to work done by others, and further pusillanimous charges. In fact, he was genial and gregarious, ‘barking’ only when interrupted at his microscope, and as much prepared to drink a beer with his men as to cheer the ‘O.P. football team’ on the field. Those who toiled to complete investigations forgot that the concept had been his and that the experiments and field-work had been planned and mounted by him. The results justifiably bore his name.

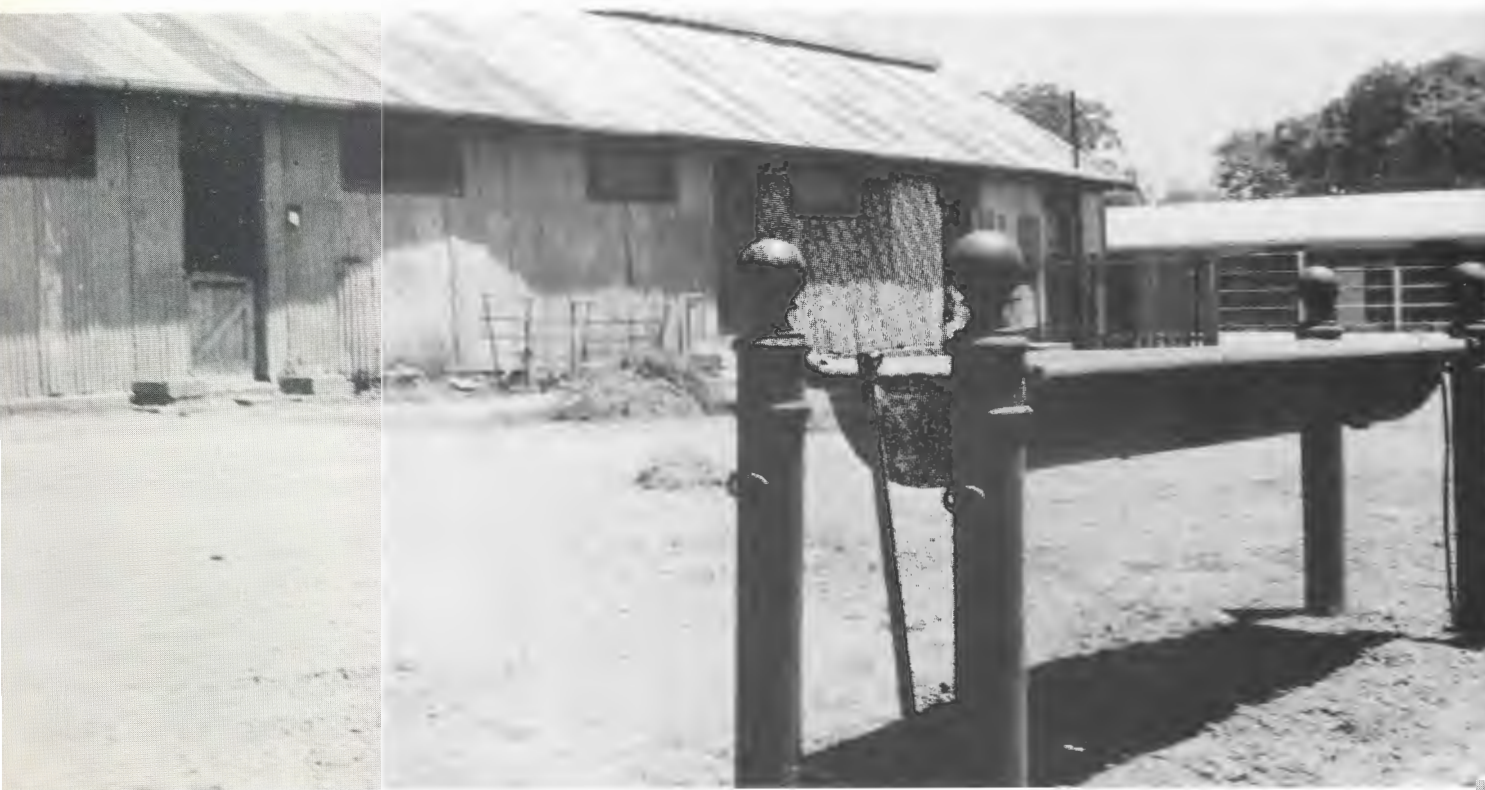
Domestic troubles likewise haunted the family. Marie’s husband failed to support her and money, barely spared from heavy educational expenses, had regularly to be sent. Margaret



New Forces at work – The Governor of the Transvaal talking informally to a Middelburg notability during the Agricultural Show in 1907. Lord Selborne was a notable diplomat, every element in the population succumbing to his congenial and modest manner.



The Leaders of Het Volk – Generals Louis Botha and J. C. Smuts leave in their trap for their offices with Mrs Smuts and three of her children bidding farewell.



Relics of Daspoort – a manger and corrugated iron buildings brought from Daspoort to the new Bacteriological Institute at Onderstepoort.

and Gertrud, perennially directed toward the charms of Natural History, acquitted themselves creditably at the Pretoria Girls High School. Hans, vague in his thoughts for the future, would soon finish at the Boys High where the spidery little Max was making his scholastic way without sign of brilliance and too small for robust sports. Arnold had plans for all of them but already Hans showed signs of non-compliance. Problems abounded, none worse than the simmering discontent surrounding Union and all that it meant for Onderstepoort. Thrice weekly, Arnold and Emma addressed themselves to the solution of mathematical problems (there were then no crossword puzzles) to take their minds off besetting cares.

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38 The prevailing atmosphere was thick with surmise. Smith had completed his draft reorganisation of the departments of Agriculture into a single Union body. Theiler knew where he stood. His immediate concern was to draft legislation applicable to Stock Diseases throughout the Union for the first meeting of Parliament. No one knew who the new Prime Minister would be – some said the veteran Merriman of the Cape, others the Afrikaner Botha of the Transvaal. In April, Selborne convened the sixth and last session of the Transvaal Parliament which voted its remaining resources – £1,500,000 – for the construction of a massive elegant Union Government Building in Pretoria designed by Herbert Baker, and £100,000 for an Agricultural College. After opening the third post-war Agricultural Show, Selborne made his valedictory in a long and hopeful speech in reply to Botha's amiable and appreciative address in Dutch. Then he was gone, the last solid symbol of Imperial strength. It wanted only a few weeks before the great metamorphosis on the 31st May. Gladstone and his entourage sailed from Southampton. At that moment, unexpectedly, King Edward died and all was confusion. Edward the Peacemaker was no longer King of the Transvaal and his son George V was duly proclaimed in Church Square, Pretoria on the 9th May 1910 in the presence of Louis Botha, Prime Minister; Jan Christian Smuts, Colonial Secretary; Jakob de Villiers, Attorney-General and the whole Transvaal Cabinet. He reigned for three weeks during which his father was buried on the 20th and all businesses closed. On that day, Gladstone was sworn in at Cape Town as Governor-General of the Union of South Africa and official instructions were received from England that nothing was to stand in the way of public rejoicing on the 31st May when it would be inaugurated. Before the month was out, everyone knew that Botha was to be Prime Minister. Who, Theiler wondered, would now be his Minister of Agriculture?

39 The British South Africa Act of 1909 made provision for the appointment of various commissions – Public Services, Financial Relations, etc. – to regulate the consolidation of powers and activities under Union, including the delicate question of what should be Provincial and what National. Smith had foreseen that for some time, the four Colonial Agricultural Departments would have to continue as before. Always a virtually independent unit, Theiler had to decide what to do with their various laboratories – Watkins-Pitchford's bacteriological research institute at Allerton outside Pietermaritzburg; the Cape's Veterinary Bacteriological Laboratory at Graham's Town; and various experimental stations. Like the Laocoon that Smith became, he would probably be strangled by red tape; but for the moment, hope lit the horizon. The heady prospect of having a hand in developing a new nation was captivating. Theiler had always held a Pan-African view but could control only the Transvaal. Now almost the whole sub-continent would be his domain and already diseases with which he had hardly or never had to deal were creating crises – Lamziekte making a cattleless desert of the Northern Cape and Bechuanaland, wire-worms destroying the ostrich feather industry in the Eastern Cape and Little Karroo (one of the major sources of the Cape's revenue); miscellaneous sheep

42 diseases and other afflictions which had hardly entered his orbit in the Transvaal. It was a time for heavy thinking and planning – ‘an exceptionally trying time’, Smith wrote, failing at first to control the over-lapping and confusion.

In readiness for the great day, Gladstone (hurriedly created a Viscount in response to hot resentment) arrived in Pretoria on the 25th May. On the 31st, the first Union Cabinet, carefully drawn from all four Colonies, was announced. Botha as Prime Minister retained Agriculture. Relief was tempered with apprehension – how could he run the whole country and yet have time for its most important industry? Smuts as Minister of Mines, Interior and Defence would help as he always did but of the Free State’s old Abraham Fischer for Lands, little could be expected. It was a caretaker Cabinet without a mandate and the country was forthwith plunged into electioneering, Botha creating an immediate sensation by announcing his candidature for Pretoria East (where he had had a house for some years), the Transvaal seat of the popular Sir Percy Fitzpatrick. For more than three months, the general atmosphere of speculation and uncertainty was accentuated while the economic situation in no way improved.

43 The whole machinery of Union lurched confusedly forward on a temporary basis announced in June. F. B. Smith was appointed Acting Secretary for Agriculture with his Cape vis-à-vis P. J. du Toit as Under-Secretary and special Under-Secretaries for Natal (H. A. Hime) and the Orange River Colony (W. J. Palmer). Every man in high position hoped for Union appointment and many jockeyed for advantage. Giving his presidential address in March to the new Natal Veterinary Association formed in November 1909, Colonel Watkins-Pitchford (his brother 45 Wilfred was to be transferred to Johannesburg as Government Pathologist and Bacteriologist prior to appointment as director of the new South African Institute for Medical Research) 46 ranged over the history of veterinary science in Natal in heavily hinting terms, not omitting to mention the lost credit for the Rinderpest serum discovery. ‘Much of our work’, he said, ‘has passed unnoticed and gone by default for want of an occasional fanfare of trumpets’ and dutifully drew attention to the opportunity for further feats ‘as our Colony is just about to lose itself in the greater and more spacious affairs of United South Africa.’

47 At the June meeting of the Transvaal Association, Theiler was elected president and confined himself to urging Union legislation establishing the rights and status of the profession whose three associations – Cape, Transvaal and Natal – should be federated. In concluding remarks he mentioned the astonishing discovery that Trypan Blue used for staining, had proved a specific against biliary fever. At the next quarterly meeting in September, he would give his presidential address. During that period, in large and small event, the tempo of the times changed from frustrated inertia to frenzied pursuit of new goals.

48 ‘Science’ embodied in the forlorn figure of Robert Falcon Scott visiting Pretoria in the hope of raising funds for his polar expedition (his ship *Terra Nova* already lay at Cape Town), 49 flashed into brief prominence. Staying with the Gladstones at Government House, Scott gave a public lecture with slides emphasising the scientific nature of his work – Meteorology, zoology, geology, biology and a survey of the magnetic field – of special interest to Theiler, then absorbed in drafting Union legislation and planning the consolidation of veterinary research services. Scott interviewed Botha, Smuts and other members of the Union Cabinet (which had contributed only £500 to his expedition) and, gaily visiting and sight-seeing as much as he could, went his way never to return. The Gladstones began a tour of their domain, hardly noticed in the mounting hysteria of the coming election.

The climax came on the 15th September 1910. The following day, a stupefied country learnt that their Prime Minister had been defeated by Fitzpatrick in Pretoria by 95 votes. Other heads had rolled including the Transvaal Treasurer H. C. Hull, intended Union Minister of Finance, and many confident notabilities. Where reassurance had been sought, there was now further

confusion and insecurity. Amid a hubbub of political discussion and speculation, Theiler solemnly went the next day to the Pretoria Magistrates Court to deliver his presidential address to the Transvaal Veterinary Medical Association. The total attendance was five.

50 In a carefully-prepared address delivered in his guttural voice, Theiler made no reference to the loss of his Minister. He had taken a long look into the future and spoke with passion in invocation of his own vision. 'You all see in front of you the great South Africa', he said, 'You see the rapid progress of civilisation and you see the necessity of giving facilities for sons of the country to get their education in agricultural matters as well as Veterinary Science in the country itself. . . . You are fully aware – and you know by bitter experience – how meagrely the knowledge concerning Tropical Diseases has been dealt out in the colleges of Europe. You will agree with me that as the diseases do not occur on the sacred soil of England or the Continent, there is no occasion to deal with them at the home colleges,' and he went on to urge the support of the Association in impressing on the Government that 'the establishment of a Veterinary College for the Union of South Africa is imperative.' He spoke with particular feeling.

51 Two months earlier, a prominent Vryburg farmer, J. Fred Pentz, had visited him and discussed the increasing ravages of Gal-Lamziekte among the cattle of Bechuanaland, the proliferation of quack 'cures' ('Bert Bowker's Gal-Lamziekte Cure' – Bowker was a farmer at Carlisle Bridge in the Eastern Province – Arthur Mayer's, a rancher at Kuruman; and others) and the continuing prevalence of Horse Sickness. Theiler had offered hope with Horse Sickness; but Gal-Lamziekte continued virtually unknown to him. A correspondence had already begun with the stricken ranchers of the Northern Cape and, come order in Union, he would deploy his new forces to attack the disease. Order was still a long way distant. Only a month before, the Public Services or 'Retrenchment Commission' had been appointed by the Governor-General in terms of the South Africa Act. Exactly a year later, its Fourth Report (in which F. B. Smith had assisted) dealing with the organisation of the Department of Agriculture was published and shocked the country, particularly Theiler.

52 In the delusory absence of these future upheavals, Theiler continued confident of the importance of Onderstepoort's work and included in his address to the Transvaal vets, a short resumé of the advances and intricate investigations being made. Gonder of Hamburg (whose colour illustrations of protozoa embellished Theiler's 1910/11 Report) had made such an elaborate enquiry into 'Kock's granules' and the anatomy of the tick (whose salivary glands had proved revealing) that it was now possible to produce East Coast Fever artificially by inoculation. (Theiler had also persuaded his Government to grant £500 to Professor G. H. F. Nuttall to make similar investigations at Cambridge). An immunological technique might result.

53 Even more radical was Theiler's flying in the face of his American colleagues with what 54 English commentators called 'some distinctly revolutionary research work'. Redwater, it had been stated, was caused in its initial acute stage by the *Piroplasma bigeminum*, followed by a further stage due to what Theiler called 'marginal points'. He now flatly stated as he had in Nairobi that this was nonsense and that the condition caused by 'marginal points' was not a sequel to Redwater but another disease altogether, also caused by the tick. Immunisation against 55 Redwater did not protect against it. He called it 'Anaplasmosis' and stated 'I am thoroughly aware that this new conception will not be so readily accepted on the other side of the Atlantic but I can assure you that we have so much evidence that nothing can upset it' – brave words 56 indicative of his confidence and stature. He had no such evidence about the hovering spectre of Gal-Lamziekte but in the same spirit, announced that 'although we have not been successful yet in finding out the cause of this disease, there is every reason to believe that this will soon be accomplished'. Nature made him eat his words.

Fame was now proving a serious impediment to Theiler's activities. Of the many who visited

57 Onderstepoort, few did not demand to see the great man. Theiler tried to hold himself accessible, particularly to farmers on whose testimony he relied; but the general run was burdensome. Barely had he delivered his presidential address than telegrams began to be exchanged between Smith and the gubernatorial train travelling through Natal on its return to the Transvaal. Gladstone wanted to visit Onderstepoort on the 27th September – would Theiler be there? The colourless Governor-General and his wife (who soon evinced her dislike of South Africa) accompanied by a military A.D.C., Major Garroway and secretary, duly arrived and were met by the greying Smith and Theiler, professionally attired in his working white apron. Theo Meyer took a photograph. What transpired was nowhere recorded, either officially or otherwise.

58 Theiler sent the photograph to Smith, asking permission to publish it in the *Transvaal Agricultural Journal* but Smith declared it unsuitable for the *Journal* and appropriate to Theiler's Annual Report. Neither the photograph nor any mention of the Gladstones' visit figured in that official publication or any other.

It was quite otherwise with the Duke of Connaught who, deputising for his nephew George (who, as Prince of Wales, was to have officiated but now was King) had come to South Africa to open the first Union Parliament in Cape Town. By November 1910, all the leading political figures (Botha had been returned by the Losberg constituency east of Potchefstroom) and high government officials including Smith were already in Cape Town. There was no one in Pretoria

59 to arrange the reception of the son of Queen Victoria, even Lord Methuen then being absent at the Cape. All was left to Theiler (who had himself been in Cape Town during 'the Royal

60 Visit' to attend a conference of the Inter-Colonial Agricultural Union). On the 28th November

61 1910, frock-coated and top-hatted, he awaited der onkel des Englischen Königs and a large entourage. They were all exhausted after continuous official engagements including driving up

62 the precipitous Meintjes Kop in a motoring car to lay the foundation stone of the Union Buildings. On that morning, the Duke, resentful at being in mufti, had reviewed the troops of the Pretoria garrison on the Race Course. As the ceremony ended, he and the Duchess with their daughter 'Princess Pat' were rushed to Onderstepoort followed by Lord and Lady Methuen, Lord Hamilton of Dalziel, Sir Francis Hopwood, Miss Evelyn Pelly (lady-in-waiting) and a

63 number of military officers and officials. They all signed the Visitors Book. Their advent so resounded that the next signatory in the Book a few days later, J. Langley Levy, a glib journalist on the Johannesburg *Sunday Times* was able to record the awed recollections:

'The Duke was a keenly interested visitor to the Laboratory and saw every phase of its multitudinous labours. "Theiler", he said, on being introduced to the doctor, "wherever I've been from the Cape to Cairo, I have heard of Theiler. Well, doctor, we'll see if you justify your great reputation." And the doctor did – up to the hilt. The Duke, I am told, saw the manufacture of serum but the Princess Pat could not be persuaded to enter the laboratory and watch the process. "Don't be foolish!", laughed Miss Pelly, the lady-in-waiting, with which unconventional utterance, she literally pushed the Princess into the room and made her one of the

64 spectators willy-nilly.' In his Annual Report, Theiler recorded – 'There were over 500 visitors to the Laboratory and I would particularly refer to the honour conferred on the Institute by the visit of Their Royal Highnesses the Duke and Duchess of Connaught and Princess Patricia.'

65 To Alfred, he wrote – 'The Duke expressed himself very appreciatively.' It was all very enheartening.

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Theiler needed it. The troubles of his vastly-expanded field were accumulating and pressures were being brought to bear on him. The Lamziekte bogey had ceased flitting and settled on his

shoulder. For him, it was a cattle disease undergoing routine investigation by James Walker at the farm Schoonheid near Christiana in the Western Transvaal. Previously notorious for cases, few had appeared; but Walker conducted feeding experiments and bacteriological investigation of the organs of victims. Some of these he took to the Institut Pasteur in Paris and the Veterinary College at Alfort where he began his study-leave in September 1910, D. T. Mitchell taking his place. Nothing conclusive having emerged, Theiler closed the Christiana station and proposed opening another at Smith's Kraal owned by the Leo brothers in the Orange River Colony. To the ranchers of the Northern Cape and Bechuanaland whose livelihood was slipping away with increasing speed, these academic adventures were frivolous.

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67 Let by 'battling Butler of Bechuanaland', the modest but powerful editor of Vryburg's *Northern News*, they mounted a campaign to force Theiler's hand. Most were English-speaking, some well-educated and informed, and several were subscribers to the *Cape and Transvaal Agricultural Journals* which, together with the *Natal* (also lively and authoritative and replete with leadership) ceased publication in October 1910 and were replaced in February 1911 by *The Agricultural Journal of the Union of South Africa* – dull, colourless, diffuse and impersonal, lacking in inspiration and leadership, and pronouncedly bureaucratic. Theiler regularly wrote for it.

68 Butler exerted himself to revive the Vryburg Farmers Association of which he was secretary, writing continuously in the editorial and news columns of his lively weekly on all agricultural matters and particularly Gal-Lamziekte, its vaunted 'cures' and the mounting annual losses in cattle. Arthur P. Mayers' 'preventive' was the straw at which many tended to clutch, having no faith in Theiler's lengthy and incomprehensible investigations. Mayers, hoping for massive Government bounty, refused to divulge his 'secret'. The local Massouw Farmers resolved to ask General Botha to send a delegation to Mayers on his farm Grootfontein near Kuruman to investigate his 'preventive'. Tempers were becoming ugly when the newly-elected Member of Parliament for Bechuanaland, D. W. (Danie) Wessels intervened and early in October 1910, took Mayers to Pretoria to sell his specific for £10,000. Botha was ill but the Acting Minister for Agriculture F. S. Malan convened a meeting in his office attended also by F. B. Smith, his Under-Secretary P. J. du Toit and Theiler. The atmosphere was 'not as sympathetic as desired', indeed antagonistic. Wessels and Mayers wanted the local farmers to test the 'preventive' under Government aegis with the evident aim of claiming reward if it succeeded. Smith coldly told him to patent it. Theiler refused even to countenance the proposal and offered a controlled experiment with 100 contributed cattle treated with the specific and 100 not. He emphasised that the disease was of erratic incidence and that the experiments might last over two or three years. Wessels and Mayers visited Onderstepoort on the 6th October and, personally impressed by what he saw, Wessels subsequently tended to toe the Government line. There was much chatter in the district when they returned and one of Butler's now prolific correspondents, commenting on the Government's offer to test the 'preventive', wrote – 'This should not delay the establishment of a Veterinary Research Station in Bechuanaland in order that the stock diseases peculiar to the country be eradicated.' Butler publicly welcomed the suggestion. It became his Holy Grail.

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72 On the 27th October 1910, Wessels rendered account at the monthly meeting of the Vryburg Farmers Association. The inconclusiveness of the whole affair riled the ranchers and one of the most prominent, G. D. Smith 'in a very powerful speech', lambasted the Government. Lamziekte, he said, grievously affected Bechuanaland, the Western Transvaal, the Free State and the Cape. One Eastern Province farmer had lost 75% of his milch cows. What had the Union Government done for Bechuanaland? Nothing (loud applause). It should put the money down for an experimental station and provide cattle to test Mayers' preventive. Everyone knew that

experts disparaged laymen but some of the world's great discoveries came from that source. Wessels defended the Government and was swept aside. It was unanimously resolved to appoint a committee to consult Mr Mayers and, without discussion, 'that this meeting is of opinion that the Government should at as early a date as possible establish an experimental station in Bechuanaland to scientifically investigate the disease known as Gal-Lamziekte'.

73 The feeling of the meeting infected the whole cattle-raising area and Butler fanned it industriously, calling inter alia on Mayers to be public-spirited and make his 'preventive' available to all. As secretary of the Association, he conveyed its resolution to the Government and at the next meeting on the 8th December 1910, read the reply. F. B. Smith had baldly stated that 'experiments were being carried out along the lines indicated on the Western border of the Transvaal' (Christiana, about 100 miles from Vryburg). The gathering was incensed. Expressing the highest indignation, the meeting resolved to forward the correspondence to their Member so that he might insist on the station being in Bechuanaland and nowhere else. Butler had hatched a plan to raise £5,000 from the ranchers (such was their need) to pay Mayers out for his specific but he failed to appear at the meeting to discuss it, being engaged in haggling with Theiler (through Wessels) for a 2% death-rate when tested. Wessels had told Butler that Theiler now intended making the test at the new station, Smith's Kraal near Warrenton in the Boshof district of the Free State owned by the Leo brothers whose losses from Lamziekte were very heavy. They were prepared to make 200 test animals available. Bechuanaland ranchers made similar offers, including McKee of Border siding. Profiting by the situation, 'Bert Bowker's Cure for Lamziekte' resumed its large advertisements in the *Northern News*.

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75 For Theiler, it was all very vexatious at a time when his affairs were moving to a climax and he had cares enough of his own. The shocking news that his friend George Turner had contracted leprosy in England moved all Pretoria, despite the turbulence of the Royal Visit. November/December were always neurotic owing to the intense heat and school examinations. Arnold was anxious about Hans, now writing his delayed matriculation and listless about the future. He proposed sending him to Switzerland for pre-University training. His own future lacked clarity and he was making little progress in dispersing the murkiness which still clouded the consolidation of veterinary research services. 'Exceptionally trying circumstances', Smith reported.

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77 When the new Union Parliament considered the Agriculture Vote under Estimates, many grievances concerning pests and diseases were ventilated by farmer-Members and, Botha remarked sarcastically, Opposition front-bench Members who were all townspeople. There was much mention of Gall-Sickness/Gal-Lamziekte. Dr T. W. Smartt complained of heavy losses in Bechuanaland (his own estates were not far distant). Botha, briefed by Smith, rose splendidly to it - 'He quite realised the importance of the Bacteriological Department and he hoped the House would never cut down the Vote (hear hear) . . . Their best thanks were due to the important work done by Dr Theiler and whatever the doctor thought was necessary for the successful carrying out of experiments was granted by the Government. As to Lamziekte, the matter was receiving the very serious attention of the Government and Dr Theiler was carrying out experiments.' Wessels felt bound to remark that 'if nothing were done, cattle farming in Bechuanaland would be a thing of the past'. He confirmed that the Government had offered Mayers £5,000 if his 'preventive' proved effective. Under the Vote, Theiler had asked for £40,000. He got it intact. 'What a contrast between before and now!' he wrote exultantly to Alfred.

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81 At a confused and gloomy time, there were other small pleasures. In token of the importance of animal diseases to the Colonial Empires, the Imperial German Government had sent Professor Robert Ostertag of the Berlin Veterinary College (whom Theiler had last seen at The

82 Hague) to South West Africa to investigate an epidemic of Sheep Pox. Theiler invited him to Onderstepoort where he signed the Visitors Book on Christmas Day 1910, and made him an honoured guest at the quarterly meeting of the Transvaal Veterinarians in Johannesburg on the 31st December. Ostertag was charmed and spoke at length on his mission, concluding reassuringly with the view that Sheep Pox (with a mortality of 50% to 90%) would not reach South Africa. He was further charmed when the vets gave him a solemn dinner after the meeting at the Goldfields Hotel. A good ambassador had been made. A further pleasure to Theiler was appointment to the Advisory Committee for the proposed Agricultural College. Led by the Mayor of Pretoria, Sir Johannes van Boeschoten (a plethora of South African knighthoods had distinguished the New Year Honours List) and the Transvaal Administrator, Johann Rissik, a party of experts and notabilities visited a site at Fountains which the City proposed to offer to the Union Government. Theiler, Gray, Burt-Davy, Gunning, A. G. Robertson and other longstanding proponents were included. Typically Theiler had written to Alfred asking for appropriate literature.

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The New Year portended nothing but trial and tribulation. The massed brains of the Government's advisers had evolved the new hierarchy in the Department of Agriculture and on the 1st January 1911, the incumbents took office on a temporary basis amid shock and disappointment to many individuals. Onderstepoort and its ancillary activities would now be controlled by:

(Acting Director of Veterinary Research for the Union – Dr Arnold Theiler
Assistant Director – Lieutenant-Colonel H. Watkins-Pitchford (Pietermaritzburg)
Assistant Director – W. Robertson (Graham's Town)

83 Of his immediate associates, Theiler would now have on a national but acting basis C. E. Gray as Principal Veterinary Surgeon assisted by J. D. Borthwick and in the Transvaal, by J. M. Christy; Cape – R. W. Dixon; Native Territories – J. Spreull; and Free State – A. Grist; for Plant Pathology and Mycology – I. T. Pole Evans (Burt-Davy was not mentioned); for Entomology – C. P. Lounsbury; and later, for Chemistry – C. F. Juritz.

84 The chaos and consternation in the Civil Service when these and other alignments were made all but paralysed its activities. The fear of retrenchment at a time of economic depression and widespread unemployment affected the highest and the lowest and poisoned personnel relations. There was in addition real impediment in establishing national methods of operation vis-à-vis the previous colonial systems and a strong tendency for officials to lack initiative and to refer the most trifling matters to their superiors who in turn, referred them to other departments. No one dared blot their copybooks.

To Theiler fell the extremely uncongenial task of centralising the activities of men, long his equals and rivals and loyally supported by their colonial governments and communities, who were bound to resent the superiority of his office and the comparative negligibility of the institutions which they had zealously developed over many years. Onderstepoort was to be the Central Research Institute and Allerton and Graham's Town mere sub-stations. It was a bitter pill for Watkins-Pitchford and Robertson to swallow. Theiler had the grace and manner to meet the situation but his own position was far from congenial. From a commanding position (Botha and Smuts well knew that almost any country in the world would gladly employ him), he sought an interview with the Prime Minister.

Theiler was confronted by the perennial problem of paid employment: promotion from tech-

85 nical expertise to administration. From his first days in Africa and particularly after the loss of his hand, he had devoted himself to bacteriological research and not to veterinary practice. His skills had created their own unique outlet and he had made of Onderstepoort a scientific institute of worldwide fame. He was cock-of-the-walk in the Transvaal but when it was merged into Union, he would not be commensurately promoted but in fact demoted into an office-bound bureaucrat directing the researches of others. Further, his salary of £1,200 a year was inadequate to his responsibilities. Au fonds, his heart was not in the kind of work he would be expected to do but yearned for academic fields and the pursuit of Pure Science. On the 28th January 1911, he took train to Cape Town.

86 Botha, with Smith in attendance, listened to him carefully and with a high degree of apprehension. If the new country were to crawl out of suffocating depression, the agricultural product must at all costs be increased, particularly the meat, wool and feather export trades. (Meat, owing to widespread East Coast Fever, and butter were still being imported in large quantities from Australia and elsewhere.) This man was essential to all of them and more. He was holding a pistol at their heads but there was no alternative to making concessions.

87 Theiler spoke his mind on a man-to-man basis. He had been with Botha during the War and his favoured and willing servant since. He was now 44 and wanted to realise his life's ambitions while having to provide for a family of four minor children and other dependents. He would have to continue working but not as a bureaucrat. In the pre-Union days, he had always done all the research work personally and accepted responsibility for it. Now the field was immense and he had insufficient scientific assistants to deal with it. 'There is no question of being able to control their work in detail', he said, particularly in respect of new complicated diseases for which he would nonetheless have to accept responsibility. 'Parliament would expect far more from the Director of Veterinary Research than it was possible for a mortal to do.' He wanted no part of it. By choice, he would like to be a Professor of Veterinary Science at a South African University or Central African Agricultural College. If work he must as Director of Veterinary Research, he must be given more assistants and opportunity to become better equipped by study overseas. No other civil servant could similarly have held a Minister to ransom. Botha paid it willingly.

88 Theiler took the train back to Pretoria on the same day – Monday the 30th January – and two days later, Smith confirmed the terms of the interview – his salary would be increased to £1,500 from July 1911; his Minister would grant him leave not exceeding one year for overseas study when convenient; his Minister would do his best to get a Chair of Veterinary Science for him when his present work was completed or safely consigned to competent hands. Botha had bought time and Theiler had secured his immediate future. Both had reason to regret it.

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The men who constituted the first Union Parliament had difficulty in adjusting themselves to national affairs. In general, everyone felt competent to speak about everything, often in trivial terms, and the debates were long characterised by parochial attitude and lack of largueur. Additionally and increasingly, racial politics were injected into the forum. Botha's policy of conciliation and coöperation staggered before the strident claims of Afrikaner dominance and allegations of discrimination which issued from his own Free State henchman, J. B. M. Hertzog, Minister of Justice, and a growing band of followers. The tendency (known as 'Hertzogism') had been evident before the Election and now was increasingly overt. It had a pronounced effect on the general activities of the Department of Agriculture (particularly in the appointment of minor officials such as Scab Inspectors, escalating to higher positions). The assertiveness of

89 Afrikaners even threatened the venerable Transvaal Agricultural Union when a rival body – the Organizatie Vereniging – staged a simultaneous congress on agricultural affairs in February 1910. Botha himself came to resolve the differences and an amalgamation was arranged. Theiler who had been asked to address the new body, prudently replied that he had received no official instruction. The patched-up truce hardly concealed bitter feeling that Afrikaner interests were still dominated by the English.

90 All sections of the population and especially the ‘poor whites’ (who besieged the office of the Pretoria Resident Magistrate, demanding relief work) had expected the mere Act of Union to wreak miracles. Conditions in fact grew worse and the temper of the times was bitterly disputatious and frustrated. Race-hatred and political mud-slinging infused community life generally and ‘conciliation’ became all but a dead letter. Despite their poverty and dispiritedness, the Dutch-speaking people, largely in the northern part of the Union, became more articulate in their opposition to the Government’s avowed principles. A temporising Botha made great play in the first session of Parliament that no one was to be forced, no steam-roller tactics employed, even in protecting the country against stock diseases by enforcing Scab regulations, prohibiting the trekking of sheep, instituting compulsory dipping, etc. Afrikaner assertiveness continued to grow. For the moment, it was of no particular concern to Theiler whose principal gadfly was the English-speaking ranchers of Bechuanaland.

91 Their tiny associations – Griqualand West, Vryburg, Taungs, Massouw and other groups recently constituted to combat the prevailing menace – together with individuals who considered themselves specially qualified, such as J. Fred Pentz and Charles Butler of Vryburg – wrote him constantly. They could quote plausible figures. Though it was agreed that some cases could have been caused by Anthrax, the Police had reported that in four months, about 4,000 beasts had died from Lamziekte in the Vryburg, Mafeking, Kuruman and Taungs areas (an additional unreported 2,000 deaths were suspected.) At £5 an animal, the loss was severe.

92 Butler, still hopeful of the dilatory Mayers’ ‘cure’, published innumerable letters from all quarters describing supposedly effective treatment. A Taungs cattle-owner recommended ‘ $\frac{3}{4}$ bottle of vinegar, 2 spoons of mustard given as an emetic, the vinegar to soften the hard-caked dung in the blaar pentz (known to English cattlemen as the “leaf stomach”) which in some afflicted cattle was dry enough to light with a match) followed by a powerful purgative viz. a spoon of powdered aloes on the back of the tongue’. Others favoured a lick of Stockholm Tar, sulphur and salt; massive doses of paraffin; Little’s Dip; Epsom Salts; Glauber Salts; etc; and hanging a sick beast by the neck for an hour or two. J. Fred Pentz recorded Theiler’s saying when he had met him at Onderstepoort on the 19th July 1910 and discussed Lamziekte ‘cures’ – ‘Let us hear all the raads (remedies). We are not above hearing from anybody, not even from an old Boer or even a Kaffir. We may be able to build on it.’ Now he had written to Pentz, deploring the use of strong purgatives as likely to inflame the intestines. Patience was running out among Theiler’s new parishioners. ‘I think it is time’, one of them wrote to the *Northern News*, ‘that we left all so-called “cures” alone and unitedly press the Government to have this disease which is devastating our herds scientifically investigated. If Dr Theiler’s time is too much taken up in investigating East Coast Fever, Horse Sickness, etc, then it is the duty of the Government to employ the services of another man of the same calibre.’ The heresy hurt.

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95 While Botha successfully piloted the Diseases of Stock Bill through Parliament, its author was instituting just such an investigation about 100 miles from Vryburg in the equally-afflicted Free State. The Leo brothers on their Smith’s Kraal farm had supplied the 100 beasts which Theiler had divided into two lots of 50. His association with Burt-Davy had convinced him that Lamziekte, like Stijfziekte, must be due to a toxic plant and the investigation was devised accordingly. 50 beasts were muzzled and cruelly herded in the veld with the remaining 50 which,

96 unmuzzled, grazed freely. The 50 muzzled beasts were fed at night in a bare kraal on fodder brought from an area where Lamziekte was unknown. Mitchell, in charge of the station, also attempted to transmit the disease by injecting organic material, crudely drenching with similarly infected stuff and feeding with bones from Lamziekte victims. Many months would pass before conclusive results could be obtained. It occurred to no one that centuries of investigation, irked by even greater impatience, had failed to find cures for recurrent human diseases. Bechuanaland was not waiting.

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97 No single man, however young and ambitious (and Theiler was neither, though proud of his office) could cope with the vast demands made on the Director of Veterinary Research. His Department was admittedly in a state of chaos and his own Division barely embarked on 're-organisation'. Watkins-Pitchford, supported by local sympathy in being usurped by 'the foreigner' (as he later contemptuously called Theiler) virtually did as he pleased and Robertson, also confronted by Lamziekte, was making his own bacteriological investigations. Theiler, in addition to continuously briefing his Minister (Botha defended him doughtily in the Budget Debate, rejecting all criticism of the Agriculture Department and any reduction in its Vote – 98 'I refuse to lengthen my blanket at the top by cutting a piece off the bottom') was compelled to address various Agricultural Congresses, to write articles for the Department's *Journal*, supervise his large staff and elaborate experiments at Onderstepoort, develop a vaccine against East Coast Fever, tactfully initiate control at Allerton and Graham's Town, receive increasing 99 numbers of distinguished visitors (including nostalgically the ailing Dr J. W. Leyds and his wife from Holland), and maintain an immense communication (12,550 letters received and 100 12,523 despatched in 1911) with the whole Union and overseas. He was well served by his staff, particularly his Chief Clerk, the indispensable H. W. R. King. At this most inconvenient moment (March/April 1911), one of his dearest pigeons came home to roost – the Belgian Government 101 sent the heads of the Agricultural Colleges at Brussels and Bruges with supporting staff and six veterinary surgeons from Katanga in the Belgian Congo for instruction in tropical diseases at 102 Onderstepoort. They continued coming and others from all over Africa including E. Hutchins from Nairobi. Nowhere else in the world could such instruction be given.

103 The cauldron boiled in Bechuanaland. In his dual capacity, Butler kept it well fuelled. When the Vryburg farmers met on the 28th April, they were told that 8,000 cattle had died in the Cape Colony from Lamziekte in 1909 and many more in 1910. The meeting passed an ingenious resolution requesting the Government to devote all duties levied on imported meat to the expenses 104 of combatting stock diseases. In Butler's fertile mind, a further idea took shape – the Association should itself initiate a fund to combat Lamziekte and ask the Government for a £ for £ 105 contribution. Then he paid one of his periodic visits to Pretoria (usually to attend Newspaper Press Union meetings) and called on Theiler at Onderstepoort on the 29th May. Theiler took to the dynamic little Quaker whose main interests were his newspaper, his dorp and district, and all worthy works in the interest of the community. Butler was impressed by the immense pre- 106 occupations of his swarthy host who had just returned from Glencoe in Natal where he had inspected progress in immunising against East Coast Fever and later lectured a farmers' meeting at Machadodorp on preventive measures.

107 Whatever their feelings about Lamziekte, the Bechuanaland farmers had a high regard for Theiler whose articles they read in Butler's paper and in the *Agricultural Journal*, and particularly for his work on Horse Sickness. Horses by the hundred continued to be moved by train down-country for safety during the Season. They hoped he would refine the method by which mules

108 were successfully immunised to enable them to inoculate their horses. The Massouw farmers who corresponded with him, intended taking the risk and trying it on their own horses. Butler raised the Lamziekte question with him with such energy and gusto that, infected by the urgency, Theiler told him that he would leave for Vryburg within a week and what was more, would bring his colleague J. Burt-Davy, the Union Agrostologist and Botanist. That night Butler caught the mail train and issued his paper the next day. It carried an excited and historic advertisement:

VRYBURG FARMERS ASSOCIATION
Next Meeting on Thursday 8th June 1911
Lecture by J Burt-Davy, Government Botanist
Proposed Lamziekte Fund
etc etc

SPECIAL VISIT OF DR THEILER

On Friday evening, June 9th in the Town Hall at 8.15 p.m., Dr Theiler, Director of Veterinary Research, will give a lecture on Animal Diseases. This will be illustrated by a number of lantern slides.

Chas Butler
Secretary

In following issues, he 'plugged' the visit extensively and urged all farmers to take advantage of it.

109 Taking the night train to Kimberley/Cape Town on the 6th June, Theiler, Burt-Davy and Theo Meyer (technical assistant and photographer) arrived at Warrenton the following afternoon and waited four hours for the northbound train to Rhodesia. It was a journey Theiler was to make innumerable times without ever complaining of the tedious delay. Station masters, porters, farmers, idlers, 'Kaffirs' were all fair game to his enquiring mind. Great heat and bitter cold seldom troubled him. It was only 100 miles to Vryburg (where the railway had ended when Theiler made his first journey in 1892) and with numerous halts at rural sidings, the party arrived at dawn and made their way to a primitive hotel for an early breakfast. Hardly had they finished when they were formally welcomed by the Farmers' Association's standing president (until the Government forbade civil servants to officiate), the Civil Commissioner and Resident
110 Magistrate F. W. Roberts and the secretary Charles Butler (who had rhapsodised in his leader that 'it was most refreshing that so shortly after the consummation of Union, it was possible to welcome two of the highest officers in their respective spheres in our midst').

111 Local notabilities and ranchers had already assembled in the hotel and without thought of rest, the great man was introduced to them and conversation on Lamziekte began, continued in the dusty streets as the gathering walked to the Stock Fair Kraals to inspect animals. This was merely an hors d'oeuvre to the convocation of 40 or 50 ranchers who awaited Theiler in the Municipal Council Chamber at 11.30 a.m. Theiler took the floor. He told them how, at Deelpan near Lichtenburg, he had mounted experiments to ascertain how cattle got the disease - through the mouth, feeding on pasture, through the skin, through a wound, or through ticks. Nothing conclusive was gained owing to the erratic incidence of cases and he had moved the station to the badly-infected farm Schoonheid at Christiana. Perversely, from the wide tests employed, not one animal contracted Lamziekte. At that stage, the exorbitant sum of £1,500 had been spent on abortive investigation but he had decided to try again on the notorious Smith's Kraal farm near Warrenton where Mitchell was in charge. He read a list of 165 experiments to transmit the disease from infected stock to healthy animals. All had failed. A farmer had sent old bones eaten by cattle that had died. Theiler had fed them to sound beasts. Not one had sickened. He himself suspected ticks. He had collected ticks from Lamziekte areas - from meerkats, buck, etc -

and every animal to which they were applied went on living. He appealed to the gathering to advise him. The intent expression on the eager turkey-red faces changed. Every man had something to say. Theo Meyer recorded it all. At 1 p.m., Butler intervened and took his guests home to lunch. Theiler had a short siesta.

Back at the Council Chamber at 3 p.m., the ranchers gave their testimony. There had been no stock disease in Bechuanaland until the Rinderpest, they said. One claimed that since he incinerated the carcasses of Lamziekte victims, he had no losses. Another stated that before developing the disease, the animal went mad, eating, bones, rags, anything. Several said that transferring cattle to other forms of grazing stopped the disease. Perhaps a grass was the cause. Theiler asked whether sheep and goats got it. Goats, they said, but the course of the disease was longer. A huge body of conflicting evidence emerged. Theiler reiterated his belief that Lamziekte was not infectious. He asked for careful observation of grasses to determine whether any fungus, rust or smuts existed. He also asked for samples of plants. The ranchers for the first time felt important. They gave him a hearty vote of thanks. That night, Burt-Davy gave his long lecture on toxic plants and demonstrated the collection of grasses he had brought. Every seat was occupied and some stood. Vryburg was electrified by all the expertise.

The Stock Fair had brought a large number of cattle-raisers to town but many, some from 100 miles distant, stayed to hear what Theiler had to say the next day. They were waiting for him in his hotel the following morning and discussions continued for the whole forenoon. Burt-Davy caught the train to Pretoria in the afternoon but Theiler attended a meeting of the Executive Committee of the Farmers Association. They wanted his view on Butler's pet proposal to raise a fund to combat Lamziekte. Surprised and encouraged by their enthusiasm, Theiler suggested that they devote it to mounting experiments to determine the cause of the disease. He wanted a series of observation stations. All present, Butler particularly, were suddenly dedicated and important men. In the evening, Theiler gave his address on Stock Diseases in the Town Hall to a 'good attendance' of ranchers and townsmen (many dorp-dwellers also ran stock on 'farms') with Theo Meyer projecting colour microscopic slides of protozoa, parasites, etc, some magnified 5,000 times. The bucolic audience had never seen such things. Touched by the afternoon's decision, Theiler praised the proposal to raise an Experimentation Fund with the Government contributing £ for £ and thanked the meeting for its confidence in him. He was only human, he said and might fail in finding the cause of Lamziekte; but if he did fail, it would not be for want of love for the work and trying his best. He would go back to Pretoria with a very good opinion of the district and he would depend on them to give him every assistance in his investigations. Thence forward, they were his men. Butler glowed.

Theiler was not yet done. On the morning of the 10th, he again met the Executive Committee whose private pet he had become. Mr W. C. Hunt of Doornbult offered him a cart and horses whenever he might need them. Others confirmed coöperation. They all adjourned to the property of Mr Masson where a sickly cow stood in the veld, already surrounded by the dorp's doctors, local worthies, ranchers and stockmen. Accompanied by Meyer with his camera, the district veterinary surgeon Elphick and with Butler ever at his side, Theiler was to give a demonstration of the type of technical assistance he required. The chance of seeing the great man at work was relished.

The cow, according to the cognoscenti present, was not a Lamziekte victim and would have recovered from its evident indisposition but became a sacrifice to Science. To the astonishment of all, Theiler first pricked it all over to determine any areas of paralysis. Then it was despatched by the local butcher Ted Pavitt and dissected by Elphick, handicapped by his Department's having failed to provide him with the necessary instruments. Theiler talked all the time. He was a born teacher. He showed his craning audience how to take blood-smears and how to report a

- 112 postmortem. 'He gave in extreme detail the observations necessary (among his own staff, he would never countenance "N.U." - "nothing unusual" - on a postmortem sheet without full justification), urging the use of non-ambiguous terms and the avoidance of vague words such as "rotten" . . . ' The cattlemen said they would not have missed it for anything. They had already
 113 been astounded by Theiler's finding a tick unknown to him in an animal's ear and bearing it
 114 off to Pretoria while begging them to find more. They now knew what he needed. 'He had
 115 made a forceful impression on all', wrote the triumphant Butler, girding himself to promote the most difficult consequence of the whole affair.
- 116 Theiler left that afternoon for Warrenton where Mitchell, travelling the 11 miles from Smith's Kraal by cart, met him to report developments and the failure of Mayers' 'preventive'. Four of his own cattle to which it had been applied were dead from Lamziekte and eight from the control group. No more was heard of him.

* * *

- The glories of Union had faded into oblivion. Conditions were worse than they had ever been. Botha, sickened by the intrigues and bickering in his Government, had left for England in April to attend his first conference of Imperial Prime Ministers and the Coronation of George V (where, sentimentally, Lord Selborne carried the standard of South Africa). Smuts was left in charge as Acting Prime Minister and holding also the portfolio of Agriculture in addition to
 117 Mines, Interior and Defence. From London, Botha wrote him anxiously - 'Dear Jannie - Sauer writes me that the railway and the general revenue are falling fast. I hope it is not serious . . . ' The economic situation was desperately serious. Smuts confronted widespread poverty,
 118 unemployment, lack of agricultural production. Levelled with the rest, the Vryburg Farmers opened their Fund for Theiler. In a week, they had £78. In a month, £150 and slowly onward, each man contributing what little he could.

- Theiler, through Butler, kept closely in communication with them. He asked for supplies of
 119 the new tick. Butler arranged for the Association to offer monetary prizes for collections submitted by ranchers. Theiler carefully composed a Report Sheet of 36 questions with spaces for answers and bound together in a book, on Lamziekte for them to complete and return to him.
 120 Butler reproduced it in his *Northern News* and saw that it was distributed. (It was also reproduced in the *Union Agricultural Journal* which appreciatively mentioned the Vryburg Fund and began to publish letters on Lamziekte.) Butler prominently published anything relating to the
 121 disease, however trivial viz. 8 out of 10 ducks died after eating meat from a dead ox. By October,
 122 the Fund had reached over £300 with donations of 5s. to a maximum of £5.5s.0d. contributed
 123 by townsmen as well as ranchers, dairy firms and agricultural corporations. The district was keeping its word. On the hopeless property Armoedsvlakte (Poverty Flats) seven miles distant from the dorp where Lamziekte prevented the owner McKee from maintaining stock, a suspicious bush was found and sent to Theiler. He had immediately telegraphed, asking for a quantity to feed to experimental animals. He had also written requesting supplies of oat-hay in 100 lb lots from infected farms, railage to be paid. J. Fred Pentz remarked drily at the Association meeting that no one could cut hay during drought and that, with great respect to the Doctor who had not sent an expert to the district to conduct affairs, they had better get on with a new 'cure' propounded by Mr L. S. Meintjes. The Association agreed. All its members were now suffering severe lossess.

- 124 The Doctor was an unhappy man. His private affairs were unsettled (despite the additional year, Hans had matriculated only second-class and, detrimentally affected by his detention, was now listlessly widening his education at the new Transvaal University College. His aunt

Marie in Switzerland still required to be supported financially). Theiler was constantly travelling, beating his bounds throughout the Union and trying to coördinate the chaos into an operable organisation in an atmosphere of suspicion, distrust and naked fear.

- 125 Before leaving again for Kissingen to restore his corrupted health, Botha had written Smuts –
126 ‘Jannie, I think our departments are badly overstaffed and we shall have to retrench seriously. Burt-Davy etc and a few others in my Department you can sack at once because I feel strongly the argument that our expenditure on officials is much too high for such a small population.’
- 127 When Smuts received his letter, the Public Service Commission (known as the ‘Retrenchment Commission’) was about to issue its Fourth Report – dealing with the Department of Agriculture. F. B. Smith had sat with the Commissioners as adviser but had been powerless to prevent drastic reductions. Theiler escaped lightly with his staff diminished from 45 to 39 in the recommendations and his existing salary to be reduced (regardless of Botha’s promise to increase it). Watkins-Pitchford and Robertson were to compete for the post of Assistant-Director. The axe fell brutally elsewhere, even upon the invaluable Burt-Davy. With his work already grossly hampered by lack of scientific assistants, Theiler’s position would be insufferable and he asked
128 to be retrenched. Smuts intervened. ‘My request for retrenchment was not looked on with favour’, Theiler later recorded, ‘I took on the duties of Director of Veterinary Research with great reluctance. In fact I only held the post under protest.’ Smuts saw to it that his staff, so far from being reduced, was increased.

- Early in September 1911, ostensibly escorting an historic figure of the nineties, the Dowager
129 Lady Loch (she died in 1938 aged 97) accompanied by his wife Isie, Smuts himself visited Onderstepoort and took rapid stock of its requirements. Smith had made them clear to him and now there was the menace of Lamziekte. Smuts was a realist. He had seen how Theiler
130 had eliminated East Coast Fever in the Transvaal. Cattle from the Zoutpansberg in the north would soon come to the Pretoria market for the first time in 8 years. He must be helped with
131 the new disease. Smuts found £5,000 for Lamziekte research. Theiler’s heart was further lifted
132 at that time by election as president of the South African Association for the Advancement of Science – a notable honour.

Reams were written throughout the country about the dismantling of the Civil Service, the sacking of ‘the Milner men’, the employment of incompetents in the terms of ‘Hertzogism’ and the rapid decline of the Union into chaos and disaffection. Botha returned in September and took refuge on his farm. Theiler had made his decision and soldiered on with the assurance of Smuts’ support in importing new assistants for whom he had immediately written overseas. Uncharacteristically hors de combat for three weeks with acute influenza, he returned to exceptional activity. Vryburg had told him of the Meintjes’ specific and, unable to leave Onderstepoort when on the verge of launching his finally-tested vaccine for horses against the Sickness, he asked the intelligent and articulate Bechuanaland rancher to visit him.

- L. S. Meintjes’ properties were north of Vryburg at Setlagoli where his herds had suffered from Lamziekte as much as others. So far from relying on lore and superstition, he had applied
133 an educated mind to local conditions and evolved a preventive. On the 22nd September 1911 he came to Onderstepoort to confer with a much-impressed Theiler. In brief, Meintjes believed that wilted plants in his hot arid region became toxic and produced Lamziekte unless combatted by a powerful lick compounded of $\frac{1}{3}$ salt, $\frac{1}{3}$ bonemeal and $\frac{1}{3}$ potassium nitrate. His theory was that drought conditions produced nitrate deficiency in grazing stock and rendered them vulnerable to plants made poisonous under those conditions (a point which Burt-Davy had himself made). He could substantiate his theory with impressive facts gained from treating his own herds. According well with his own surmise, Theiler determined to examine the hypothesis in
134 situ as soon as possible. Joy abounded in Vryburg when his intention became known. He should
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136 make it his headquarters for a few months, Butler wrote, the problem was serious enough. The Association's mission to Meintjes, W. C. Hunt and A. W. Cullinan who were both losing heavily from Lamziekte, had reported favourably on the results of his specific without divulging the nature of his 'mixture'.

137 Many duties prevented Theiler's immediate departure for Bechuanaland. While he had chatted to Meintjes, Onderstepoort was preparing to receive all the Transvaal Government veterinary surgeons for instruction in the use of Anti-Horse Sickness serum which, after years of dissuasive results, he now felt justified in applying to horses as well as mules. Haemolysis had been overcome to the extent of producing only minor mortality. The whole country had been impatiently awaiting this moment. Theiler did not wait to receive the distinguished delegates to the first Union Dry Farming Congress (they all came to Onderstepoort) which Botha opened with praise of scientific farming. The Cape corner of his huge fief had called and early in October, at the request of the Farmers' Associations, he set out on an exacting lecture tour beginning at Steynsburg, Middelburg and Cradock in the Midlands and continuing to Port Elizabeth, Graham's Town, East London, Bedford and Alice. Robertson, in charge of the Graham's Town Laboratory, was abroad on vacation leave, preparing himself for future responsibilities by studying the latest research techniques in European laboratories. Such was his personal parochial popularity that Theiler, confronted everywhere by resistance to change, had to placate protesting farmers by saying that if he were transferred to Pretoria, they must not be selfish and the Eastern Province would in any case remain his preserve. James Walker was temporarily taking his place and continuing Lamziekte experiments on the farm Yarrow near Seven Foundations to determine its possible relation with *Pasteurella bovis*.

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Endemic with stock diseases of every kind including Lamziekte, the Eastern Province had special interest for Theiler in that it rode the current tide of popularity of ostrich feathers. While by no means as extensive as the famed Oudtshoorn district further south, the area around Graham's Town and particularly the Heatherton Towers property of the pioneering producer Arthur Douglass, contributed significantly to the national income and accordingly commanded his care. (Of Farm Products in 1911, Ostrich Feathers to the value of £2,253,140 were exported, their nearest rival being Hides and Skins at £1,207,651.) Theiler found it fascinating. 'I orientated myself on the conditions of ostrich farming and the accompanying diseases which I now want to study', he wrote Alfred, 'It is exceptionally interesting and very rewarding. The ostrich farmers are the richest in South Africa.' He would find little guidance in Europe for this branch of poultry research. As always, he consulted the local farmers. Bechuanaland was diverted to hear that in addressing the Bedford Association, he had mentioned 'Vryburg's unknown tick' (later identified as *Ornithodoros megnini* - the Spinosa ear tick).

146 Theiler's vitality was illimitable. Endowed with a tough constitution nurtured by hardship, he was carried along his physically- and mentally-demanding way by sheer inquisitiveness and a genuine love of scientific processes that would reveal the nature of the phenomena that interested him. His southern tour would have felled a fit man half his age; but hardly had he returned than he wrote Butler announcing his soon arrival with Burt-Davy on an excruciating tour by motoring car exposed to all the elements. By then, in response to his published request, many farmers (some very knowledgeable and resourceful) and others had contributed a mass of empiric, historic and speculative material on Lamziekte in addition to completing his questionnaire.

There was no unanimity though many subscribed to vague theories that Lamziekte was probably due to a 'germ' or 'microbe' transmitted by ticks, to wilted grass or to sour (brak) veld. Natives insisted that the white man had brought the disease by giving his cattle salt and the white man angrily replied that if he didn't, his cattle ate old bones and other refuse in compen-

147 sation. Others ascribed this craving (known as Pica) to internal parasites. Most said bones and
148 bonemeal were essential to strengthen the animals but provided no cure. Stockholm Tar with
paraffin was good, also soluble sulphur but Epsom Salts useless. An 'old man' (63) farming on
the Kaap Plateau where Spreull had made his extensive investigation in 1906/07, offered the
interesting but neglected observation that he had expunged Lamziekte and successfully run
cattle on previously fatal farms by cleaning them of all animal refuse. New owners had failed
to do so and the disease had returned.

149 Theiler tried to keep an open mind but, always a botanist manqué, inclined strongly to the
150 toxic plant theory, abandoning the tick hypothesis. The assiduous and excellently-informed Burt-
Davy then made confusion worse confounded by introducing fine distinctions to which Theiler
paid little regard. Burt-Davy pointed out that some plants were poisonous only at certain times
or at a certain age or when fresh and not dry or in certain parts (seeds could be more toxic than
foliage) or in large doses when small were safely assimilated. Paradoxically some could safely
be eaten by cattle but were fatal to horses, mules, donkeys and pigs. Animals learnt to avoid
toxic plants (Theiler was unable to induce a hungry ox, starved for 36 hours, to eat Yellow Tulp
151 (*Homeria pallida*) even when chopped and mixed with hay.) Par contre, grazing cattle could
develop a morbid craving for the taste of lethal plants. The chemical aspect of the problem would
have to wait until the arrival of the new assistants.

152 In searing summer heat, Theiler and Burt-Davy left Pretoria in an open car with hard non-
balloon tyres, frequently punctured, on woodspoked wheels whose maximum velocity could not
exceed 30 m.p.h. on the shocking rural roads. There was no money to keep the gravel main roads
in repair and the sandy or rocky side roads with their innumerable cattle gates were in worse
shape. They came via Wolmaransstad and Schweizer Reinecke to Vryburg where D. T. Mitchell
153 met them. Butler and his colleagues had been busy. They took the two great men to the desolate
Armoedsvlakte farm a few miles out of the dorp where cattle could no longer be kept because
of Lamziekte. Its owners, the McKee brothers, offered it to Theiler for a year without charge
as an experimental station. The Vryburg Farmers Association offered its Fund, now standing
at over £300 for such expenses as might be involved. Its members offered to supply cattle for the
experiments. Theiler was delighted. Trudging over the barren property with Burt-Davy, noting
its strange grasses and small bushes stunted and withered by three years' drought, its lack of
water, its underlying dolomitic rock and exposed situation, he made a plan sur le champ to
fence it (at Government expense) into several large 'camps' or paddocks of several acres in
which to conduct closely-controlled feeding experiments. The sun still shone out of his eyes for
Vryburg and the ranchers stood at his command.

His decision made, Theiler took the north road on the 12th November 1911 and, detouring to
numerous ranches whose owners such as W. C. Hunt at Doornbult he already knew, got as far
as Madibogo and Setlagoli on atrocious roads. Here he met Meintjes on his estate West End
and came to an arrangement by which Onderstepoort would test his preventive which the
Government would recommend if successful, while Meintjes in the meantime marketed it
commercially. Gathering much first-hand information, Theiler intended visiting further cattle
154 stations during his four-day safari 'but owing to the heavy nature of the roads, the motor car
was unable to negotiate them.' The heat was intense in Vryburg and the dust suffocating. Both
bearded and wide-hatted, Theiler and Burt-Davy were burnt brown by sun and wind. After
two days' further discussion, they drove the empty 80 miles via Geluk to Kuruman, thence to
Kimberley, Windsorton Road, Taungs and Bloemhof to Pretoria where Theiler found he had
155 been awarded a D.Sc. honoris causa by the University of the Cape of Good Hope. He was
pleased that his services were recognised by his 'new home land'.

Within a few days, Burt-Davy and Theiler had covered a country new to them and gained a



The main building of the Onderstepoort Bacteriological Institute (later Veterinary Research Institute) shortly after it was ready for use in 1908 but before the gardens and grounds were fully laid out.



Commemorative Photograph specially taken for the Souvenir publication intended for the formal opening of Onderstepoort – (from left): General Louis Botha (dangerously over-weight and with swollen legs from a heart condition), Transvaal Prime Minister and Minister for Agriculture; Dr Arnold Theiler C.M.G., Government Veterinary Bacteriologist; and F. B Smith, Director of Agriculture.



The Gubernatorial Visit in 1910 – (seated): Viscount Gladstone and Viscountess Gladstone (in mourning for King Edward VIIth); (standing): Major Garroway A.D.C.; the Governor-General's secretary; F. B. Smith, Director of Agriculture; and Arnold Theiler in his famous white apron.



Injecting serum into an Ox's tail at Onderstepoort.

156 vivid impression of its conditions. They left a trail of excitement in Vryburg which justifiably now felt responsible for the solution of the Lamziekte problem. At the December meeting of the Farmers Association, there was a record attendance (the membership had greatly increased), the Fund had advanced to £341, 35 beasts were offered free and 71 on a compensation basis, Meintjes offered his farm for experiments and a resolution was passed thanking the Government for attacking Lamziekte scientifically under Dr Theiler's direction. 'This meeting wishes further to express its absolute confidence in Dr Theiler's methods of investigating the course of the disease so far as they have been disclosed and wishes to assure the Government and Dr Theiler of its hearty support.' Both replied appreciatively (as well they might) and Theiler himself, 157 accompanied by Burtt-Davy, had returned on a one-day visit before his letter came. He supervised the partitioning of Armoedsvlakte into fenced camps and ordered boring for water for each 158 one through very hard rock. The experimental animals were to be delivered there by the 12th January 1912, the Smith's Kraal station near Warrenton would be closed and the new station put in the charge of a farmer-lay assistant, R. R. Sharpe who had been engaged in August to supervise East Coast Fever tests in Natal.

159 In February 1912, Theiler was back again. The Fund was still increasing, 40 animals were 160 already on the station, feeding tests had begun with local veld plants (Burtt-Davy selected 57 – later more – from various areas which were ultimately tested at Armoedsvlakte, Onderstepoort and other stations), Butler who was in constant correspondence with Theiler, had spent money from the Fund in building corrugated-iron stables on the property for controlled tests, and the battle against Lamziekte had been energetically begun. Vryburg prided itself on being in the front line. It was in fact the vanguard for the world.

161 In his straitened and vexatious circumstances, Theiler had done his best. Cattle were allegedly dying by the thousand in Bechuanaland, the Western Transvaal and the Free State; but he had neglected matters of the highest importance to try to save the situation. Unable to give them more than cursory attention, his two new assistants had arrived – Dr F. Veglia, an Italian veterinary parasitologist recommended by Professor Perroncito of Turin (his knowledge of animal 162 parasites was very limited, Theiler found) and G. A. H. Bedford recommended by Theobald whom he had served as entomologist. Theiler hoped they would solve many problems. In 163 December 1911, between his many trying sorties to Vryburg, he had traversed the Union, always by hot and smutty train, to visit Bloemfontein, inspect the laboratory at Graham's Town and deal with Natal. Watkins-Pitchford was being recalcitrant. Inflated by the success of his 'Three-Day Dipping and Tick-Destroying Agents' (which Theiler intended to test for himself) and his 164 popularity and esteem among influential people in Natal, Pitchford paid no heed to his ordained 165 subordinate position and went his own way. In an original attack on the problem of Horse 166 Sickness, he proposed using hybrids bred from zebras (congenitally immune) and horses. Theiler's new serum was in the meantime being widely hailed during a bad Season though by no means fully successful. When the Acting Director of Veterinary Research signed his 167 Report on the 1st January 1912, he was compelled to add that though he appended a report from Graham's Town, 'up to the time of writing, no report has been submitted by the Acting Assistant Director of Veterinary Research, Pietermaritzburg'. The situation quickly reached crisis point.

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168 'Arnold is always away nowadays', Emma told Alfred (she was now of customary invaluable aid to Arnold in reading his scientific literature and marking papers for his attention), 'and when he returns, naturally finds an accumulation of work as he never has enough assistants. The

Union has put all departments out of order as it is not easy to merge the civil services of four colonies without much disagreeableness and without the work thereby suffering.' 'Centralisation' continued to be furiously attacked. The powerful South African Agricultural Union resolved that the Department of Agriculture be reorganised on the American system (with which Smith had flirted), giving the Section heads wider powers. Violent views erupted in the Press and Parliament regarding the chaos, the cost, the destruction of the Milner efficiency and the impracticability of the whole concept of centralisation. Botha, sometimes rescued by Smuts, had a torrid time in the House of Assembly where, led by the members for farming areas and joyfully joined by the Opposition, attacks on his addled Agricultural Department proliferated. Lamziekte conveniently gave urgent cause and D. H. W. Wessels (Bechuanaland) C. A. van Niekerk (Boshof), T. W. Smartt (Fort Beaufort) and many others spoke to it. All commended Theiler's efforts (he was now confirmed in office as Director of Veterinary Research) and were at pains to deny criticism; but all, in one form or another, stated that the dramatically-increasing losses could not be stopped while his duties were so wide. 'He could not be everywhere at the same time' or 'spread himself over the whole country' - he must be given more money and assistants.

169 Botha who, via Smuts, had given him £5,000 without the authority of Parliament, a motor car and a free hand, feebly felt that further assistants 'would only get in each other's way'. 'Dr Theiler had a better knowledge of South Africa than any imported experts and the matter could safely be left in his hands.' Wessels was not satisfied. He wanted a number of experts under Theiler's direction and warned that 'the farmers would be slightly disappointed with the Minister's answer'. Butler applauded his member in the *Northern News* and gave space to the quackery that continued. It was at least a symptom of the urgent need. ('A dog specialist' at Taungs, one Evans, formally advised Theiler that Lamziekte was caused by 'a round worm' which was vigorously discussed in Parliament and elsewhere. There were many other such fancies.)

Theiler came to Cape Town to receive from the University of the Cape of Good Hope his first honorary degree. The ceremony was held in the City Hall on the 17th February 1912 with some fanfare, duly noted by his friends in Parliament. The opportunity was used for a discussion with his sorely-tried Minister. Botha was concerned with the rapid spread of East Coast Fever throughout the Eastern Cape (he dared not antagonise voters by enforcing compulsory dipping against ticks) and the worse depredations of Lamziekte in the Northern Cape and Western Transvaal. Theiler had solved the first problem which had become a departmental matter, and was in course of solving the second. For him, the problem of 'reorganisation' had become insoluble. Watkins-Pitchford continued intransigent and resisted all coöperation. Theiler returned to Pretoria and Botha called a meeting of all the Natal members of Parliament.

The discussion revolved around 'the professional jealousy between Dr Theiler and Colonel Watkins-Pitchford'. It was said with regard to East Coast Fever that Pitchford had discovered and promoted three-day dipping which eliminated the causative ticks; but Theiler was jealous and discounted it in the light of his newly-applied inoculation against the disease. Botha, the great conciliator, had a difficult time. There was no doubt in his mind that Theiler, the appointed head of Veterinary Research, should remain the 'baas' and that if Pitchford refused to conform, he must go. The Natal members were mostly loyal to their man but saw the cogency of his case and agreed with his view. Botha had done 'his utmost' as he later said, to keep Pitchford's services for the country. His salary as Assistant Director of Veterinary Research would have been £700 per annum. He was offered £1,000 and the opportunity to do his own work at Onderstepoort. But Pitchford was opposed to the concept of a Central Laboratory and refused to work under Theiler. He was duly informed of the Prime Minister's decision (mollified by full-some encomiums) and resigned immediately, returning to veterinary service in the British Army

177 and, upon retirement, employing his versatile talents in business enterprises connected with cattle-feeds. Strong partisan feeling endured in Natal.

178 It could not be held against Botha that control of his Department was slipping from his over-
full grasp. Nature, abetted by partisan political interests, was everywhere asserting dominance
over Science. Furiously attacked in the debate on Estimates of Additional Expenditure (when,
inter alia, he sought authorisation for Theiler's £5,000), Botha was openly insulted by a pro-
Pitchford Natal member (Hugh M. Meyler of Weenen who had visited Onderstepoort in June
1911). He was widely accused of pinning his faith in Theiler while East Coast Fever raged at the
179 Cape (then being officially visited by R. E. Montgomery of Nairobi to study Theiler's new
preventive inoculation) and while Lamziekte with mounting losses developed widespread. Botha
180 well-primed, ably defended himself and his Department but not for long. Theiler and Gray
had been to the Transkei to urge the wholesale building of dipping tanks. Now Theiler went on
181 the inevitable uncomfortable mission to Pietermaritzburg to address the Natal Agricultural
Union meeting on the 23rd/25th April, explaining the position of the Allerton Laboratory whose
control he had formally assumed. It would continue as before, he said, with A. W. Shilston in
charge as the work was too heavy for Pretoria and Natal had special problems in which its
farmers could help. Further conciliatingly, he stated that inoculation against East Coast Fever
was only an emergency measure and that the fight must continue to be waged with the Natal
182 method of dipping. He could afford to be amiable. In four months, he would leave for Europe
for his promised year's sabbatical. In constant consultation with Alfred, he had made plans to
study Parasitology, Pathological Anatomy and Physiology (in a makeshift laboratory with
Emma's help) and Botany and Geology thrown in for good measure.

183 The spectre of Lamziekte would take long to lay. It was, in Theiler's own words, 'causing
terrible destruction and even threatening to ruin the newly-developed north-western districts'.

184 On one of his many visits to Vryburg, he told Butler that he had cabled England, France,
Germany and Switzerland for assistants to combat it but there had been no replies. He had
opened a new station on the farm Kaffraria at Christiana and another at Besterput in the Free
State for further feeding experiments. At Armoedsvlakte, the cattle in the various camps were
185 strictly watched but perversely, with animals dying on neighbouring properties, none contracted
the disease.

186 Its nature remained completely baffling despite bacteriological and botanical attack. Always
accompanied by Burt-Davy who had not been 'sacked' (they covered tens of thousands of miles
together, mostly in withering heat), Theiler personally investigated it in all areas of incidence.
Returning from Natal via the Cape Midlands in April/May 1912, they spent a few hours in
187 Vryburg and Theiler told Butler of its mystifying features. He remained convinced that it was
caused by something eaten – a toxic plant or grass or several. It seemed confined to grass veld
but in the Graaff Reinet district, occurred only on the mountains, cattle feeding on the plains
being unaffected. Laboratory investigation had shown no causative micro-organism. The disease
was not infectious. Unweaned calves of infected cows showed no trace. Cattle victims which
recovered were not immune. Burt-Davy pressed his hypothesis that certain grasses might be
poisonous at certain times. The abnormal craving for bones, tins, rags, refuse might arise from
it. Butler listened to it all and sadly editorialised – 'Nature holds her secrets very tightly.'

188 It was no time for an academic approach to a dire economic problem. In the Cape native
territories, it was said, the only transport was by horse and mule – there were no longer oxen.
The whole livestock industry, essential to general revenue, was faltering. A situation comparable
189 to the Rinderpest epidemic had developed. Robertson, returning to Graham's Town from over-
seas and impressed by Bowhill's earlier inculcation of *Pasteurella bovis*, began experiments to
establish whether inoculation with cultures of it might confer immunity from Lamziekte. Like

190 others, they would take long. Botha, goaded by taunts that he put party political interests before the country's welfare, showed a brave front in the House, defending his agricultural policy and his riven Department which had not issued an Annual Report since 1910. He recited Theiler's achievements with Horse Sickness and East Coast Fever and mocked the ridiculous 'cures' for Lamziekte. His enemies made capital of his discomfiture. On the 31st May 1912, Merriman noted - 'This is the second anniversary of Union which seems to have brought not peace but a sword to South Africa. Prime Minister incompetent, Cabinet quarrelling, administration chaotic' and during the debate on the Agriculture Vote - 'Botha cut a sorry figure and the lamentable disorganisation of agricultural department too evident . . . a monument to incapacity.' Vere Stent in the *Pretoria News* flailed him continuously. Unlike Koch who had magically produced a Rinderpest 'preventive', Theiler was unable to conjure an antidote to Lamziekte to take some of the heat out of the attack on his master.

193 When the House rose in June, Botha informed Smith that he wished to see Theiler on his return to Pretoria to discuss his field and future plans. Smith well knew them but when Botha returned, Theiler was away on the gruelling schedule which would enable his proposed departure early in September. In the intervening two months, tired and strained in his famous 'will to work', he was driven as never before.

* * *

194 Since the beginning of 1912, Alfred (who taught Natural Science and Mathematics at the Lucerne Canton School) had been carefully enquiring at the Zurich, Berne and Basle Universities regarding the special facilities that Theiler required for his chosen studies which he might have to pursue in Germany if Switzerland failed. In the event, Basle proved the most suitable. His old mentor Zschokke of Zurich would be accessible. As he was knowledgeable about Cestodon and Theiler wanted briefing on worms in ostriches, it was particularly felicitous. There was also Lang with his new text-book including Helminthology and Schinz the botanist. For months, Theiler had been assembling parasitological and pathological specimens and a plant collection for his intended work. 'I have already a mass of material for my studies', he wrote, 'and have already done preparatory work on part of it and planned a further part which will be pursued during my absence and of which I shall be kept currently informed.'

196 His senior staff - James Walker, D. T. Mitchell, Daniel Kehoe, Theiler himself (in a particularly thorough historical survey for which he had consulted the authoritative Dr G. M. Theal, and analysis of all the facts that were known from Hutcheon's exemplary notes onward), and the virtually-seconded Burt-Davy - had all worked intensively on Lamziekte during the year and contributed highly-detailed papers to his Second Report (1912). Kehoe had also dealt with Plant Poisoning, Walker with destructive parasites in ostrich chicks, Andrews with the effects of snake bite on domestic animals. Onderstepoort remained a fairly routine vaccine factory but its research programme had carefully and thoughtfully to be planned. Robertson, helped in the ways and procedures of the place by the invaluable King for the first few months (King then went on leave) would do his best but he would be a pale shadow of the driving demanding Director of Veterinary Research with his clear concept of the form and methods of work and the ends in view. Theiler laboured to lay down a pattern which his proxy, already at hand, could pursue. He had also to plan and supervise the reconstitution of his Institute as the Central Laboratory for the whole Union. Extensive alterations and additions, including a house for Robertson, were set in train with the coöperation of J. S. Cleland, an architect of the Public Works Department. By the end of June, Theiler was compelled to advise F. B. Smith that no more visitors could be received owing to the disorganisation of building. They came all the

199 same, including Theiler's early gadfly, Lieutenant-General Robert Baden-Powell, Lord Grey, the Portuguese Governor-General of Mocambique and entourage, many German scientists, foreign veterinary surgeons and a host of others.

200 Theiler had yet to reap the reward of Botha's bursaries, two of whose recipients were completing their courses in London. On the 1st October 1912 in the presence of Sir John M'Fadyean and other dignitaries with Stewart Stockman officiating for the Royal College, the first to qualify P. R. Viljoen would receive the Coleman Silver Medal, Second Ralli Prize in Practical Surgery and the Class second prize for Surgery while H. H. Curson would be awarded the Centenary Prize, the first prize in Histology and Anatomy and others. Fully qualified, they and others such as E. E. M. Robinson whom Theiler himself had encouraged, would soon pay their debt to South Africa. A further candidate was an alert clear-thinking young man from Stellenbosch with a brilliant academic record. P. J. du Toit attracted Theiler's attention as the recent recipient of a Ph.D. with honours in Zoology at Zurich University after study at Berlin and Halle. Undertermined in direction, the 24-year old du Toit buttonholed Theiler on the deck of the ship as he left for Europe and, pacing up and down with him, listened to the great man expatiating on his need for specialists. Du Toit forthwith decided to return to Berlin to study Veterinary Science.

202 In the meantime, unsettled conditions were accentuated by a ministerial change. Always on a knife-edge of hostility between north and south, Transvaal and Cape, Botha, as Merriman had noted and everyone knew, had been confronted by a Cabinet crisis. His Finance Minister H. C. Hull of the Transvaal had been at odds with his ingenuous Railways Minister, J. W. Sauer of the Cape who deemed it unnecessary to report his pro-Cape financial adventures in his department to his Transvaal colleague. Hull accordingly resigned. To maintain Cape support in a less contentious position, Botha transferred Sauer from Railways to Agriculture. He held the portfolio for only six months. For once, Smuts had been unable to extricate Botha from the imbroglio. He had been heavily occupied in drafting and piloting through Parliament the Union's first Defence Act initiating and regularising local armed forces in place of the vanishing Imperial might. Smuts saw room in the new Defence Force for colleagues of Boer War days.

203 Among those he persuaded to join it was the embittered J. C. G. Kemp who enrolled in 1912 at the Training School at Potchefstroom with future implication in Agriculture.

204 In his last few weeks in South Africa, Theiler was very much part of the swirling currents that characterised 'my new home land'. He had quickly become a formidable national figure and nowhere more eminently than among his peers. At some time or another, they all came to Onderstepoort and its Visitors Book reads like a roster of the men and women who made South Africa. In June 1911, the 'Universities Commission' had signed its pages - the chemist/historiographer George Cory, the zoologist J. E. Duerden (who was also investigating ostrich parasites), the botanist/museum director Selmar Schonland, all from Graham's Town together with Snape and Thomson of Cape Town; Notcutt, Goddard and van der Riet of Stellenbosch, Rinde and Ridge of Bloemfontein, and Dr C. F. Juritz of Pretoria. Now, a year later, Theiler travelled to the Eastern Province where Graham's Town was celebrating the centenary of its founding, to preside at the meeting of the Association for the Advancement of Science and to meet again the men most active in his own cherished fields - Scientific Research and Teaching.

205 He addressed them on the 2nd July 1912 in the Stevenson Hall of the Collegiate School in Port Elizabeth, covering in his inimitable simple and direct manner the whole of his field, its achievements, its limitations through lack of sufficiently powerful microscopes, its paradoxes and its failures.

206 With generosity of spirit, he specially mentioned Joseph Baynes of Natal as the pioneer of dipping to eliminate ticks - 'the credit for demonstrating its practicability is particularly due to

Lieutenant-Colonel Watkins-Pitchford', he said. 'I will now have to mention a subject where the use of the microscope and all transmission experiments into animals failed. It is the disease "Lamziekte" to which in recent years so much attention has been given by the public, the press and Parliament', and he told them of Burt-Davy's work on plant toxins and the current feeding experiments. To bring the difficulties nearer home, he reminded them that 'Mr Robertson of Graham's Town proved in an unmistakable way that the plant *Senecio latifolia* (the Dunziektebossie or Horse Staggers Bush) collected in that part of the country, proved to be very fatal when fed to horses and cattle. The experiments in Natal, carried out on the same class of animal and with the same plant, proved harmless . . . Of the physiological effect of grasses and plants under the various conditions of climate and soil in South Africa, we know nothing as yet. I am glad to state that the Minister of Agriculture to whom I have explained the necessity of such investigations has promised to add a branch for physiological research to the laboratory under my control,' and he went on to support the longstanding plea of his pioneering colleague Dr C. F. Juritz for 'a systematic and thorough chemical survey of the soil of this sub-continent.' In the guise of practical advice to the South African, Theiler concluded his address with a virtual expression of his own philosophy: 'Foster by all means the pure sciences. They are, in the hands of experts, the medium of solving the many economic problems of South Africa.'

207 His guiding light shone in the direction of Europe but exceptional ardours occupied him before he could leave. From Port Elizabeth, he made an inspection tour of the Graham's Town and Allerton laboratories with their various experimental stations, returning to Pretoria in time for his appointment with Botha on the 14th July. Incongruous though it seemed, Botha agreed to his leaving in September. Theiler had persuaded him that every possible investigation into Lamziekte would continue locally and that he himself would be better equipped to solve the problem when he returned, aided by specialised assistants whom he would select. In fact, Botha had no alternative. Theiler could hold him to ransom at any time - as he could and did any Minister of Agriculture.

208 Apart from the building chaos at Onderstepoort and the planning of its reorganised programme, there were several important occasions that Theiler could not avoid. The Transvaal Veterinary Medical Association had succumbed to the futility of trying to hold quarterly meetings and, responding to his long-proffered invitation, held two of the three days of its first annual meeting early in August at the Laboratory. A record attendance (including A. E. Hollingham, Theiler's veteran colleague of Johannesburg and Ladysmith days who gave a paper and died two weeks later) was increased by members of his staff, J. Burt-Davy and Gray's assistant, J. D. Borthwick. Valuable papers were given, some supported by laboratory and postmortem demonstrations. Theiler himself, elected vice-president of the Association, spoke on Lamziekte and Stijfziekte in cattle, Jachtziekte in sheep, and the 'experimental nature' of his anti-Horse Sickness serum which, although in use, conferred variable immunity being successful in some areas and under some conditions but not in others. It had all taken time and trouble to prepare and was hardly over when his national duties again took him away.

210 By the diligent work and enthusiasm of Butler through his paper and secretaryship of the local Farmers Association (whose meetings were now attended by 150/200 persons and whose Lamziekte Fund at an impoverished period approached £400), Vryburg had attained sufficient eminence to provide the venue for the annual meeting of the Cape's Central Farmers Association, mostly cattle-breeders. For weeks the dusty wintry dorp had bestirred itself to accommodate and entertain close on 100 grim-faced farmers from the coast to the Kalahari, obsessed with the loss of their livelihood through the rising toll of Lamziekte. Theiler, closely-cropped grizzly-bearded and smiling urbanely arrived with Burt-Davy to join the convocation formally welcomed on the 19th August by Butler on behalf of the Vryburg Farmers. The delegates, impatient

- 213 at the delay (though many were using Mentjes' method because it was effective) demanded more experimental stations from Uitenhage to the north. Theiler needed all his eloquence to calm them. He counselled patience, reiterated his belief that the disease was due to herbage which was the business of a physiological chemist and not a bacteriologist, and reassured them with Botha's promise, permitting him to find such an expert in Europe. They asked him many questions and Burt-Davy answered others on weeds, grasses and poisonous plants. Not all the flowers put in their buttonholes nor the 'garden party' and dance arranged by the Vryburg
- 214 citizens, the demonstrations and bonhomie, really pacified angry men with fast-diminishing herds. With the exception of Natal, reduced by East Coast Fever, the number of cattle raised in the Cape, Free State and Transvaal had phenomenally increased with corresponding reduction in imported beef. At that moment, 5,797,000 beasts valued at £34,782,000 grazed in the
- 215 Union in the shadow of Lamziekte. Their owners resented being fobbed off with glib promises. Theiler looked at the feeding experiments at Armoedsvlakte. 10 loaned animals had died and
- 216 Butler had compensated their owners from the Lamziekte Fund. Sharpe was running the place satisfactorily. He rushed back for a day or two in Pretoria. There he found that the King of the Belgians had honoured him with the title of Chevalier de la Couronne Belgique in appreciation of his assistance in training Belgian veterinary surgeons for service at Katanga in the Congo.
- 217 'You should put this in the newspapers - applause belongs to industry', he wrote hurriedly to Alfred, 'Be careful though that my correct official title "Director of Veterinary Research of the Union of South Africa" is in all cases connected with it as I am the first person to hold this appointment in South Africa and am as proud of it as of the Order. I have accepted ofcourse, not as a Swiss but as director of all those institutes that come under me - Cape Province, Natal,
- 218 Free State and Transvaal.' Then he was in the train with F. B. Smith, C. E. Gray, Burt-Davy and several other divisional heads on their way to East London to attend an important combined conference of the Cape Agricultural Union and Western Province Fruit Growers Association
- 219 opening on the 28th August. In the roadstead, he saw his ship *Kinfauns Castle* on its way up the coast to Durban where it would turn round to return to Cape Town for the voyage to England. Theiler now had no time to spare for the longer East Coast journey direct to Europe. On the 9th September 1912, after manifold complicated arrangements ('the travel fever has gripped me') Arnold, Emma, Margaret, Gertrud and Max took train to Cape Town and boarded their ship on the 11th for Southampton, England.