

UPHEAVAL 1905-1907

THERE WAS no part of Southern Africa at this time which, in point of unrest and emotion, was unconscious of exalted aim. With the chaos of war receding, it was a time for planning in the grand manner by men of every political policy. Those temporarily in authority were limited only by their financial resources which might curtail the realisation of visions but certainly not of envisioning. Theiler's instructions were wide and handsome. With the clear intention of building him a modern laboratory on a new site, he was told to study the leading such institutions in Europe, to engage specially-trained staff and to purchase modern equipment. Improving his knowledge and extending his connections with the best advice overseas were left to his own resources and his recognised passion for 'keeping up to date'.

1 Theiler by then was something of a local hero in some quarters. The incidence of East Coast Fever had been sizeably diminished; large areas of the Transvaal had been 'cleansed' and were again available for stock production; mules immunised by his Horse Sickness serum ran scathelessly through the worst districts and reopened commercial traffic; Lung Sickness, Mange, Anthrax, Glanders and many other stock diseases were diminishing either through his treatment or the measures he imposed to control them. In the realisation of 'reconstruction', he had proved an effective instrument and worthy of the fullest support in rendering the country productive.

2 F. B. Smith plodded on, step by step fulfilling the provisions of his 1902 plan approved by Milner. Hardly had Theiler left than there appeared a volatile little red-headed Welshman, Illtyd Buller Pole Evans, to assist the botanist J. Burt-Davy as Plant Pathologist. How little Smith's vision matched the reality was measured by Pole Evans' shocked realisation that there was no mycological laboratory in which to put the three cases of glass apparatus and one of books that he had brought, and that he was expected to practise his profession in part of a room adjoining Burt-Davy's office. It was in the spirit of the times that he stayed and became one of Theiler's closest collaborators.

3 The fervent feeling of going forward into a future fortified by new realms of knowledge was timeously assisted by the majestic visit of the British Association for the Advancement of Science convening its 75th Meeting in Cape Town and Johannesburg in August 1905 with all its hallowed procedures and assembly of distinguished overseas and local scientists. The president of the Physiology Section was the burly David Bruce. Its theme was 'The Advance of our Knowledge of the Causation and Methods of Prevention of Stock Diseases in South Africa during the last ten years'. Bruce delivered his presidential address at the first meeting in Cape Town (when Hutcheon also presented a paper) and then in Johannesburg on the 29th August in a remarkable closely-studied work. 'South Africa', he said with the relish of a research scientist, 'is particularly rich in diseases affecting domestic animals' and, beginning with East Coast Fever whose brown tick he illustrated with slides, went on to survey them. 15,000 cattle representing £200,000 had died of the fever in the Transvaal in 1904. He had been told that all the local Colonial Governments intending reducing their veterinary staffs and research budgets. 'If this was so', said Bruce in his usual brutally direct manner, 'it was the maddest sort of economy and the shortest-sighted of policies.'

His survey dwelt particularly on Tsetse Fly Disease which he also 'threw upon the screen' (he had the same lucid style as Theiler in describing his Nagana work in Zululand) and on Horse Sickness. He reported that as a military surgeon, when he 'went to the north of Zululand in

1895 with the Ingwavuma Expedition, they had lost all their horses with this disease. They started with 100 horses and had to march back on foot, every horse having died.' Bruce emphasised that the fly carrier was still unknown and that 'the blood parasite is so small in size as to be absolutely invisible to the highest powers of the microscope and also so minute as to readily pass through the pores of a Chamberland filter'. He gave due credit to the work of Edington, Watkins-Pitchford and Theiler (as he also did to Hutcheon and Spreull in other contexts) and was reported as ending very pointedly – 'The man who discovered a practical method of dealing with Horse Sickness would be one of the greatest benefactors of this country. There had always been a tradition that a large money reward was awaiting this discovery. He did not know whether this was well founded or not but certainly such a work would well deserve the highest possible reward. The best reward was to give the successful investigator more opportunity and more assistance in pursuing his beneficent work. The reward given by the French people to Pasteur was the Pasteur Institute; by the German Government to Koch, the Imperial Hygienic Institution.'

4 Very possibly he knew that the same idea had been in the mind of Milner and now most actively animated Smith, Jameson and Selborne. Only a few days before, Smith had reported to an approving Legislative Council – 'Dr Theiler is in Europe at the present time purchasing apparatus for the campaign which we hope to take against Horse Sickness next year and he is also learning the latest methods of preparing serum and so forth. We have great expectations with regard to Horse Sickness as to being able to immunise mules. We have now immunised 400 mules and so far, it has been a success.'

5 Bruce was followed by George Turner delivering his paper on 'Rinderpest: Its Prevention and Cure'. Then it was Theiler's turn. His paper, taking the same title as Bruce, was read for him and as always, was a model of lucidity. He divided it into Diseases caused by Ultra-Visible Micro-Organisms and those caused by Protozoa, ranging authoritatively over both fields. His final words were 'We may assert with confidence that the time is not far distant when South Africa will not be devastated by ravaging diseases. And this point will be won not only by the advance of our particular branch of science but by the advance of science in general.' His own multi-disciplined attack was slowly being enabled by Smith's gathering concert of experts, some of whom (C. B. Simpson, Herbert Ingle and Smith himself) had also addressed the meeting.

7 The tonic effect of the British Association's presence was sustained by its members' contributing money to a fund commemorating their historic visit through a medal to be awarded for scientific achievement in research in the discretion of the South African Association. Much thought and planning were devoted to the interpretation of this gracious gesture to which the British Association had attached no stricture beyond 'a desire that the award be made only to those persons whose scientific work is likely to be usefully continued by them in the future'. It was to be called the South Africa Medal.

8 The limelight now shone brightly on 'Science', causing the second meeting of the Inter-Colonial Agricultural Union (of which Lord Selborne had become patron) held in Pietermaritzburg in October 1905 to debate 'that this Conference considers it desirable that steps should be taken to establish a Central African Laboratory for scientific research and for the investigation of diseases among livestock, in addition to the local laboratories'. Watkins-Pitchford spoke wisely and at length on the dangers of compelling scientists to produce 'results', the high costs of depressed times and the advantages of maintaining local work. Hutcheon supported the resolution. The president, G. D. Alexander, unethically from the chair, approved it with passion, beating his familiar drum on the iniquity of importing overseas scientists. The resolution was carried unanimously. It was reaffirmed again and again by constituent branches.

9 'Centralisation' and 'Closer Union', possibly in the form of federation of the Colonies, was now generally and officially in the air though Selborne counselled *festina lente*. Botha was consolidating his political forces while Smuts prepared to leave for England immediately the Government fell and the Liberals presented new possibilities. Selborne equably toured the Transvaal in the guise of 'a brother farmer', answering resentful questions and shaking the burghers by the hand, even offering them his tobacco pouch. At Wonderfontein in the steamy Marico district, the address of the local Chamber of Commerce specially welcomed Lady Selborne for the sake of her brother, Lord Edward Cecil who, as an Imperial commander, was affectionately remembered and esteemed. Lady Selborne was alleged to be learning Dutch. Her husband, genuinely and conscientiously, was integrating himself in the country's agricultural problems. There could be no political stability without economic productivity. The costly import of agricultural products had been only slightly diminished by local production.

In Buda-Pesth, the arena was far wider but the climate equally steamy. A humid heat afflicted the delegates immediately on arrival when they foregathered at the Hotel Royal on a tropical Saturday night of the 2nd September. Cordial greetings were exchanged between Theiler and Bang of Copenhagen, Perroncito of Turin, Arloing of Lyon and Leclainche of Toulouse, Leonard Pearson of the U.S.A. and other friends of Baden-Baden days. Best was meeting the seven-member British delegation led by Professor M'Fadyean with Stewart Stockman, A. E. Mettam of Ireland and Professor Frederick Hobday. Theiler could count on their support and also on S. B. Woollatt who, with his wife, had come from Natal. On the following night, delegates gasped and sweated in the unventilated Royal Palace where the Archduke Joseph welcomed them on behalf of the Emperor Frans-Joseph. There were great language difficulties, the host veterinarian Hutyrá having earlier delivered his address in Hungarian which no one understood and by far the greater part of the later discussions being conducted in German.

10 Theiler was an eminent figure – for himself and his published works and for his command of the current languages (apart from the small British band, there were many English-speaking delegates from the U.S.A. and the British Colonies). Much of his time was spent in giving *viva voce* translations of the contributions of delegates in English, French and German during the discussion of papers of which his own was outstanding. The innovation of a section on Tropical Diseases was introduced by Lignières of Buenos Aires followed by Piot Bey of Cairo speaking on 'Diseases of Egypt'. 'Theiler of Pretoria' came next with much the same paper as he had prepared for the British Association, followed by Lavaran and Vallé of Paris, and Motas of Bucharest speaking on 'Protozoic Diseases of Domestic Animals'. Many, including the famed Dschunkowsky of Russia and Bitter of Cairo expounded and demonstrated their views. Theiler, Stockman and Woollatt dominated a 'good' discussion through their first-hand experience in South Africa and, in Stockman's case, also India. It was alleged to be the pleasantest and most instructive day of the Congress.

11 Six years had intervened on Baden-Baden where, alone and unknown, Theiler had established his liaisons with the international leaders in his field. Now, fortified by their recognition, he came as one of them, propounding novel notions, discoveries and techniques. The concept of the intermediary host, the use of new stains in revealing protozoa, the subsistence in an animal's system of dormant micro-organisms, the wide experimental techniques employed to identify a causative trypanosome or piroplasma and many germane subjects were enthusiastically discussed with Theiler proving a new and refreshing leader among the world's veterinary experts. 'Tropical Diseases' were suddenly thrown into demanding prominence. A large number of resolutions were passed emphasising the urgent need for investigation and the services of bacteriologists, mycologists, parasitologists, and entomologists. 'Piroplasmoses' were accepted as accounting for the principal cattle diseases in warm countries and, Theiler reported, 'our

knowledge regarding them is yet very meagre'. By no means alone in the field, his own work had excited high international interest.

The Congress was not well organised, much time being wasted by speakers reading long papers already in the hands of delegates. Emma examined Buda-Pesth and in the evenings, Arnold joined her for enchanting entertainments – dining on a ship drifting down the Danube with a gipsy orchestra aboard, fireworks and illuminations ashore; or wandering in the Stadtwaldchen talking to other delegates and enjoying an al fresco souper. There were also many excursions into the country to visit Stud Farms and stock-raising estates as well as abattoirs and other urban institutions. Arnold was immensely affairé, going specially to the Hungarian Veterinary College to watch Lignières inoculate cattle with his anti-Redwater serum and later inspecting it fully as part of his mission. His eye was always on what he would need for his promised laboratory in Pretoria.

12 He had reviewed the Pasteur Institute and the Alfort Veterinary College in Paris, the Bacteriological and Therapeutic Institute in Berne and the Bacteriological Laboratory of the Zurich Veterinary College, much developed since his student days. He had turned to his French and Swiss colleagues for help in his problem. Since the outbreak of Rabies in Rhodesia in 1902, Theiler had feared an epidemic in South Africa. He wanted a veterinarian who could prepare the necessary vaccine against it. Professor Zangger of the Berne Veterinary College recommended one of his graduates, Walter Frei and Theiler arranged for him to be trained in the procedures of preparing Rabies vaccine by his old friend Bordet, now director of the Pasteur Institute at Brussels. Frei began his service as an employee of the Transvaal Government in November 1906 and began work at Brussels in January 1907, reaching Daspoort on the 23rd April 1907 and bringing the original Pasteur strain of the Rabies virus.

13 Theiler also visited the Veterinary College at Vienna and, returning through Germany, made substantial purchases of equipment at the Zeiss establishment at Jena. (Zeiss gave Emma dainty opera glasses with purse attached which she used and safely kept all her travelled and troubled life.) Other laboratory purchases were made elsewhere.

14 There remained England and the many new friends made after the occupation of Pretoria and since – Colonel F. Smith, Stewart Stockman, John M'Fadyean, David Bruce who saw that he inspected the Bacteriological Laboratory of the Royal Army Medical Corps, and others who arranged his visits to the Lister Institute and to commercial suppliers. Theiler confided his staff problems to M'Fadyean who recommended his own assistant, Sydney Dodd M.R.C.V.S., demonstrator in Pathology and Bacteriology at the R.C.V.S. He had graduated in 1902 and gone to South Africa with the 10th Hussars, witnessing the post-war corruption of the country by the victims of animal diseases. He joined Theiler's staff in England on the 14th October 1905 as Assistant Government Veterinary Bacteriologist at £600 a year and sailed with him to South Africa soon after.

15 Stockman was in course of establishing at Weybridge his laboratory for the Control of Contagious Animal Diseases and gladly entered into coöperative arrangements with Theiler. The Buda-Pesth Conference had emphasised the urgent necessity of investigating in loco existing 'tropical diseases' and the danger of new ones being imported from abroad. Theiler mooted with Stockman the equally important problem of enabling the importation of thoroughbred animals to improve the local stock by pre-immunising them, particularly against Redwater. Much preliminary work had been done and they planned a systematic assault.

For Theiler, his four months' leave had been no holiday and he looked to the voyage to refresh him against coming battles. The English, disenchanted by Balfour and his effete Conservatives, were already exposed to electioneering propaganda, which, he heard on all sides, would carry the Liberal Party to power at the General Election early in the New Year. He sailed

in October with his family in the knowledge that he would have to fight for his new Research Institute and possibly without the help of his staunch allies Jameson and Smith. They might well be swept away in the new political order that was coming. Smith was on a well-earned holiday in England and Jameson would go on four months leave in January 1906. Theiler would be lacking support for the first months of his struggle and no one knew, except J. C. Smuts who left for England in December, what a new British Government might ordain for its Transvaal Colony.

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16 The family returned early in November 1905 in good time for Theiler to attend the farewell banquet for Sir Arthur Lawley early in December. Henceforth Lord Selborne himself, as Governor of the Transvaal and proponent of Lord Milner's maxims, would watch 'the scientific development of agriculture'. Theiler's hand had indeed been strengthened. Sydney Dodd immediately relieved him of much routine work in veterinary supervision and livestock inspection while undertaking vaccine production and the investigation of Swine Fever. Almost better
17 was the appointment in January 1906 of a mature man, E. B. H. Parkes B.A. (Cantab) as Superintendent of Daspoort undertaking all routine administrative work.

At the same time, Theiler's 1904/05 Annual Report was published containing the astonishing locally-produced innovation of colour plates illustrating piroplasmas and trypanosomes drawn and painted by Charles Favre, the versatile Swiss who 12 years earlier had been co-secretary with Theiler of the Schweizerverein Helvetia in Johannesburg. There joined them now another
18 compatriot of those days, Herman Oettli as a lay assistant together with R. White. Numerous natives to tend the animals on the station and grazing on adjacent leased farms (Theiler constantly increased the number of horses for serum-production and Sickness experiments) completed a staff unparalleled in any other Division. Equally unparalleled was the equipment costing £6,000 which continued arriving on Theiler's orders from overseas for grotesque
19 installation in the collection of discarded military corrugated iron buildings which represented the Veterinary Research Institute. Long inadequate, they provided no suitable accommodation for sophisticated apparatus and Theiler, 'though well knowing that it is the intention of this
20 Government to remove the Laboratory to a better place', addressed requests for additions to the stony-hearted Colonial Treasurer, W. L. Hichens who was acting for Jameson.

Resoundingly elected to office in January 1906, the Campbell-Bannerman Liberal Government (ably prodded by Smuts who soon returned to help organise Het Volk for action) abrogated the Lyttelton Constitution and appointed a Royal Commission under Sir Joseph West Ridgeway to devise a constitution appropriate to the Transvaal and Orange River Colony. The air of suspended animation that affected all but political parties, could not prevent the Transvaal Government from grasping the nettle created by the chaotic conditions of its various
21 scientific laboratories led by Theiler's. On the 28th February 1906, the Executive Council appointed a Committee to enquire into the question of Government Laboratories of which George Turner and C. E. Gray were of the original 8 members. It was concerned primarily with duplication and over-lapping, the possibility of combining activities and the selection of appropriate sites. It met four times (finally on the 17th June) during which Herman Oettli, in common with his Daspoort compatriots Porta and Schneeberger, died of enteric, greatly emphasising the need for change, Theiler and Smith (who returned in March) gave impressive oral evidence, Theiler's supporting a written report of the 5th June of the Daspoort site (which was thought 'to be saturated with enteric organisms' owing to its earlier military occupation). Oettli's death had greatly shaken him. On the 14th May, the Pretoria M.O.H. Dr Boyd had

22 reported to the Committee on the prevalence of enteric at his Laboratory and condemned it as being unhealthy for human beings. Under the heading 'Typhoid and Other Illness at Daspoort', Theiler had written his Department on the 31st May supporting the removal of his Bacteriological Institute and asking for an immediate decision as his Horse Sickness experiments would suffer.

23 The Committee, equally shocked, thought otherwise. 'It would obviously be absurd', they said, 'to suggest the actual removal to any locality of the present laboratory buildings which are wood and iron erections, mainly of indifferent construction and quite unfitted for permanent serious work. The Government of this Colony will have, sooner or later, to sanction the expenditure of a very considerable sum of money for the purpose of erecting permanent buildings for a well-organised and well-housed Veterinary Station on a really suitable site and until such buildings are erected, there would be little advantage in ordering any hasty removal of the laboratory from its present site.' The days of the Transvaal Colonial Government were clearly numbered and no radical decisions involving 'very considerable sums' could be made. Nonetheless the search for a site was energetically undertaken and Smith and Theiler drove from farm to farm in the neighbourhood, hoping to find suitable land in the 'Middle Veld' – neither sub-tropical as in the Lowveld nor severely cold as at Frankenwald in the Highveld. Theiler's Department never wavered in its support and met his every request, further increasing his staff with Theo Meyer as Laboratory Assistant, W. F. Averre as Stockman and in August, transferring W. H. R. King as Technical Clerk. King soon became indispensable to all Theiler's paper work.

24 In all the turbulence of the times – with the entertaining of the first Royal visitors to the Transvaal, the Duke and Duchess of Connaught accompanied by General Sir John Maxwell (whom Theiler joyfully greeted at a garden party), with the Westway Commission making its investigations in loco, Het Volk busily preparing to fight an election in the inevitable Responsible Government, official approval of Federation of the Colonies to be promoted, deadly and dismaying depression accompanied by drought and massive locust invasion to be combatted, and a thousand and one delicate duties – Lord Selborne likewise never wavered in honouring the charge with Milner had laid upon him to protect and sponsor 'scientific agriculture'. The shocking revelations of the Laboratories Committee drove him to make his own investigation. F. B. Smith was instructed to act as his cicerone and, accompanied by Lady Selborne, they drove to the disreputable Daspoort where Theiler awaited them on the 12th July 1906. Ever with a sense of occasion, Smith had bought a Visitors Book. Selborne, Maud Selborne and F. B. Smith were the first signatures in it. Much passed through the High Commissioner's mind. On the 1st August, the West-Ridgeway Constitution providing for Responsible Government in the Transvaal was published. There would be a new order and new difficulties. 'Protection' might still be needed.

27 Theiler was doing interesting things. He and Stockman had succeeded in halting East Coast Fever with their policy known to the farmers as 'dip, fence, isolate or slaughter'. Calamitously the Zulu or Bambatha Rebellion which flared at this time despite police and military action in which Colonel Watkins-Pitchford (awarded a medal and bar for his services) took part, had the effect of reanimating the disease in Natal through the promiscuous movement of cattle. Watkins-Pitchford was well qualified to deal with it. More important for the general agricultural development of the country was the pre-immunising of imported stock. Since his Potchefstroom experiments of 1904, Theiler had conducted elaborate and lengthy tests on Redwater with its confusing alliance of the causative piroplasma begeminum and another which he named piroplasma parva. He became convinced that the latter (which his overseas colleagues making similar tests, renamed piroplasma Theileria) produced another infection and that if imported cattle

were to survive in South Africa (they usually died swiftly from Redwater), they would have to be immunised against both bigeminum and Theileria. He had presented this problem to Stockman in England and they planned a joint experiment. Acting for the absent Smith, A. C. Macdonald had authorised Stockman's purchase of 6 English heifers which, variously inoculated with English and South African Redwater, were sent to Pretoria and quartered on the farm Lynnwood. Their temperatures were taken and their blood examined daily. Only one died and Theiler felt he was on the track of a technique that could safeguard imported stock. The experimentation was long and involved but the result might be of the highest value.

30 Of more immediate importance was his work on Horse Sickness which consumed large and costly numbers of experimental animals (the Legislative Council cavilled at his estimate of £6,703 to buy horses and mules but duly granted it – the cheapest horses cost £5 and £10 and sound young mules between £17 and £20 each). Both the president of the Transvaal Agricultural Union and Selborne who opened its Annual Conference on the 10th July 1906, spoke of it. 31 'The experiments of the Government Bacteriologist in the inoculation of mules against Horse Sickness have proved most successful' the president said, 'and the losses from the process are infinitesimal. The whole Colony owes Dr Theiler its warmest thanks for the investigations that have produced such results.' Selborne, covering the whole field of agriculture, spoke of its scientific aspect and 'the great work done by Dr Theiler (applause) and of others engaged in similar work in their silent laboratories'. The Transvaal Union endorsed the earlier Inter-Colonial Union plea for a Central Laboratory. The following night Theiler addressed the Conference on Horse Sickness and the animals he had attempted to immunise at the height of the season 32 in March. The results had been 'very satisfactory'. He had still to conquer the problem of 'aanmaning' or recurrence; but for the moment, his stock stood high. The next day, Selborne had come to Daspoort in a procession of visitors that never ceased.

Many came to learn the technique of the new inoculation. Alerted by his predecessor C. E. 33 Gray, the Rhodesian P.V.O., J. M. Sinclair had spent three weeks in the ramshackle institution and returned with supplies of the serum to inoculate his Government's mules. He was followed 34 by many other regional officers – W. H. Chase of Bechuanaland, Otto Henning of Basutoland, W. M. Power of Natal, F. Pereira and Dr de Amaral Leal of Mocambique, all coming to learn. 35 Of great pleasure to Theiler and doubtless F. B. Smith was the arrival of Henry G. Simpson M.R.C.V.S. at the instigation of Stewart Stockman and the British Colonial Office for a four-month study at Daspoort before assuming appointment in Nairobi as British East African Veterinary Bacteriologist. 'I hope', wrote Theiler in his Annual Report, 'that this will lead to our establishment becoming the training school for veterinary surgeons who wish to enter the Colonial Service.' His sordid collection of shanties on which all visitors commented, was already known world-wide as a leading centre for the study of tropical and other animal diseases.

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36 The search for a site had continued whenever Theiler and Smith could leave their offices. Sometimes Theiler went without him. On the 1st July 1906 he took Parkes to inspect a portion of the farm Onderstepoort (the lowest passageway) on which E. P. A. Meintjes held a 97-year lease. It was only 7 or 8 miles from Daspoort; the railway to the north and the Aapies River ran through it; the grazing was good and the land arable; its extent about 500 acres. Theiler considered it 'in every way a most suitable site' and forthwith wrote to Smith requesting him to obtain details and cost from Meintjes. Smith, in the interests of economy, had been fruitlessly trying to find Crown Land and had then considered Koedoespoort to the east of Pretoria where the Wesleyan Mission Station farm seemed a likely prospect if its trustees could be persuaded

to sell. Now he went with Theiler to inspect the latest hope, returning happily to Pretoria to seek Jameson's permission to obtain a report and valuation from the local firm of Dyer & Bosman, Meintjes' asking price of £5,150 or £21 a morgen was high. Smith had been shown nearby farms at very much lower cost but not nearly as suitable. In a long memorandum to Jameson on the 2nd August, he made his recommendation.

The expenses of Daspoort were extravagant. For almost all his working life, Theiler was wont to command 'en paar Paarden!' (a few horses) and later in Afrikaans 'n paar Perde!' whereat Averre was expected to produce any amount of horses, regardless of cost, for experimental purposes. Much the same obtained for other animals. In 1906, the daily Daspoort population was 187 horses, 214 mules, 32 donkeys, 53 cattle and 200 sheep and goats of which a small proportion subsisted on leased farms, the majority being stall-fed in stables at the Laboratory, bringing swarms of flies and contributing to its unhygienic condition. £5,700 was spent on their maintenance and £10,893 on buying more animals. At the Onderstepoort farm, grazing would be available, lucerne and other fodder could be grown and, Smith stated delicately, 'it would enable us to turn to good account the large amount of manure made at the Station which is now more or less useless'. These advantages in his opinion offset the high cost of the farm. He asked Jameson to get a decision from the Executive Council, then consisting of the Acting Lieutenant-Governor Sir Richard Solomon, the Acting Attorney-General H. F. Blaine, the Colonial Secretary Patrick Duncan, the Commissioner for Native Affairs Sir Godfrey Lagden (previously British Resident in Basutoland), the Colonial Treasurer W. L. Hichens, the Acting Commissioner of Mines H. Weldon and Jameson himself as Commissioner of Lands. With these conservative colleagues, Jameson did his work well and an amount of £15,000 for 'Bacteriological Laboratory' was put on the Supplementary Estimates.

The Legislative Council debated it on the 4th September, the chronic pinchbeck H. C. Hull making a contribution worthy of Kruger's takhaare. It were better, he said, to include the Laboratory in existing Government offices – a suggestion inspiring Hichens to remark that 'a diseased pig could not be put in that of the Colonial Treasurer' (his own). In a high implausible voice issuing from his ferocious red moustache, Smith presented an irrefutable case. The Station was inadequate to the huge demands made on it. Their hands had been forced by the regrettable outbreak of enteric and the loss of three valuable lives. The M.O.H. of the Transvaal (Dr George Turner) and the M.O.H. of Pretoria (Dr Boyd) had told him that the cost of converting the Station into anything like a sanitary condition would be enormous. The Public Services Commission and the Laboratories Committee had condemned it. The Horse Sickness work must be maintained. The country's livestock could not be kept alive without Dr Theiler. The Council must not have on its shoulders the responsibility of further deaths.

The legislators knew that, with what were considered unduly heavy charges and levies, Hichens had accumulated a sizeable surplus. Funds were in fact available. Jameson dilated on Smith's presentation and raised the required amount to £60,000 – about £5,000 for the farm, £10,000 for the buildings and about £40,000 for general expenses. The legislators felt that they had been tricked but passed the extended amount. Hichens himself had made a telling point early in the debate – 'it would take very much longer to meet Dr Theiler's requirements if they waited until Responsible Government came because they would have no money voted until next year'. Whomsoever it might be, the future Government was committed to the abandonment of Daspoort and the burgeoning of bacteriology in a new institute at Onderstepoort.

Jameson and Smith immediately took all the necessary steps, cautiously supporting their selection of Meintjes' farm by obtaining an opinion from Johann Rissik, now in private practice as a land surveyor. Smith, W. L. Strange of his Department, and Rissik inspected the property of which, Rissik pointed out, Meintjes was not the owner (it belonged to Cornelius Erasmus)

No. 160
 Species Horse
 Sex Stallion
 Age 4 years
 Received from

Height 18 hands
 Weight
 Marks Dark bay, star, saddle
 marks, blind right eye.

| DATE. | TREATMENT. | OBSERVATIONS. |
|--|--|---|
| 9-10-02 | Inj. subc. 5 10 c.c. blood ^{A.R. 1906/07} 400/158 | No |
| 26. 10. 02 | Inj. subc. 5 100 c.c. carb. Ser: 17344 | " |
| 31. 10. 02 | Inj. subc. 5 1 c.c. virus horse 102 | " |
| 20. 11. 02 | Inj. subc. 5 10 c.c. virus horse 166 | " |
| 5. 12. 02 | Inj. subc. 5 20 c.c. virus horse 216 | " |
| <u>Head of</u> <u>Hyperimmunised 5 horse blood. A.R. 1903/04.</u> | | |
| 2. 2. 03 | Malleined. | |
| 18. 10. 03 | | |
| 3. 1. 05 | Exported at Budocke Poort. | |
| 28 June 05 | Received back from Poort | 7/4/06 to F. Garfield |
| | | 5 Dec. 05 sent to Leonard Farrow |
| | | 7/4/06 received back |
| | | 7/4/06 to F. Garfield |
| 1908. | | |
| 3. February | Malleined (Hation 20.1.08) | 2. Feb. '08. Received back. |
| 21. " | do (Grah. 22.7.07) | |
| | | 2. March. On loan to J. W. S. Tomball (Mr. Dwyer's Farm Queen's River) |
| 1914 | | 29. March '14. Died of Stibily. |

Experimental Record of a Horse - With his position regularised, Theiler recommenced work on Horse Sickness at Daspoort with infinitely lengthy and elaborate experiments. This rare report sheet records his meticulous methods with a single horse from 1902 until its death in 1917.



Stewart Stockman, the brilliant British veterinary scientist and administrator who was appointed Principal Veterinary Officer in the Transvaal and cooperated closely with Theiler in eliminating Rinderpest, East Coast Fever and other diseases.



The Government Bacteriologist travelled through the Transvaal by cart and train and sometimes on horseback.

but the lessor. He doubted whether Meintjes held the right to draw from the Aapies River half of its flow of water in his furrow; but even if it were only a quarter, it would suffice to irrigate the 25 acres adequate to the Institution. There was additional water from springs but Rissik strongly recommended that it be analysed lest it be as polluted as the Aapies. He also insisted that before transfer was made, the rights to water in the Zandspruit on the northern boundary be secured. The price, he gave as his opinion, was more than the owner could get at that time but, taking the advantage of the property into account, he 'had no hesitation in recommending the purchase of the land'. Smith then instructed the Government Attorney to conclude the sale and, subject to Meintjes' reaping his crops and removing two zinc buildings, transfer was completed toward the end of October 1906.

42 It was not until the middle of November that Parkes could properly get his hands on the property when he promptly ploughed up 80 acres of irrigable land, 70 virgin. Everything was against him including recurrent swarms of locusts which Simpson combatted with a new arsenical spray demonstrated adjacently to an official party of Patrick Duncan, Jameson, Smith, Dr Gunning and others including Theiler himself. Green forage was essential to sick and experimental animals. Parkes produced 200 tons at his first attempt. It was only part of his multifarious duties now divided between the discredited Daspoort and the new site.

43 It fell to Theiler to impart to Patrick Eagle, Chief Architect of the Public Works Department the immense amount of information he had accumulated in Europe on the best design for a Bacteriological Institute with all its complicated apparatus, techniques and services. His typical Swiss frugality diminished in proportion to the approaching realisation of his long-cherished visions. Neither Smith nor Jameson did anything to discourage him and Selborne himself was already in support. 'You can only really help agriculture through science if you insist on your Government putting down a sufficient sum of money every year and sticking to it', he shouted to Transvaal farmers at Potchefstroom on the 10th November after riding around the Experimental Farm in heavy rain all morning. 'Do not let your votes be promiscuous or sporadic. It takes the heart out of a man like Dr Theiler if, just at the moment when he knows he is coming to the fruits of years of experiments, an ignorant critic gets his vote reduced, clips his wings, takes away the weapons out of his hands and all the money you have previously spent has been wasted . . . You must have patience and you must have faith and you must have persistence in policy.' (Selborne was always translated into Dutch by F. T. Nicholson who, he said, improved his speeches.)

44 If Theiler were encouraged to plan in the grand manner, it was nonetheless strictly utilitarian and devoid of any but scientific extravagance. His constant advice on the comprehensive design which included not only laboratory buildings but animal-breeding installations, full farm services, black and white staff facilities, transport and a host of other considerations, could be given Eagle only when his routine duties allowed. They were many and related. In November when the whole project burned in his brain, he had to go to Ermelo with Gray to investigate yet another mysterious disease - Gouwziekte causing sheep grazing normally suddenly to jump convulsively and drop dead. Toxic plants were suspected. He intended drafting Sydney Dodd to Ermelo to establish an Experimental Station. Thence to Cape Town to represent the Transvaal at an Inter-Colonial Bacteriological Research Conference where he heard of many changes. 45 Back at Daspoort, he welcomed on the 28th November his laboratory's most significant visitor since the Buda-Pesth Conference. In the expectation that he would occupy the new chair of Tropical Veterinary Medicine and Hygiene at Berlin University, the Imperial German Government sent Dr Phillip Paul Knuth to Theiler for education in the animal diseases of Africa. It was done diplomatically through the British Secretary of State for Foreign Affairs, Sir Edward Grey and tout d'un coup, lifted Theiler into another sphere of eminence and enhanced his 46

47 vision of a great Veterinary College. Speaking German, he was particularly attractive to Knuth whom he found congenial and took with him to Natal in December to collect ticks infected with East Coast Fever coöperatively provided by Woollatt and his Durban veterinarian S. T. Amos. Knuth, sent by the German Government and H. G. Simpson, destined for Nairobi and sent by the British Colonial Office, worked for weeks at the same time at Daspoort as harbingers of international scientific coöperation.

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48 The temper of the times was reaching crisis level at many points closely affecting the community. Theiler, going about his own frenetic business – running Daspoort, planning the new institute, investigating new diseases (the ‘Tzaneen virus’ and the ‘Bulawayo virus’ producing new kinds of Horse Sickness, Gouwziekte, Ephemeral Fever, etc.), introducing Walter Frei to his new duties, helping C. B. Simpson with his locust battle – was closely in contact with them. Poverty and distress met him everywhere. Hundreds of unemployed loitered about Pretoria, particularly around Meintjes Kop where they were encamped, with a rising degree of militancy. The Government (prodded by the Kindergarten’s Lionel Curtis who had written forcefully to J. C. Smuts proposing his services as secretary) finally appointed an ‘Indigency Commission’ on which F. B. Smith served. Curtis was a member and his colleague Phillip Kerr (later Lord Lothian) was secretary. It revealed an appalling state of poverty, demoralisation and depravity. Long before it reported, a mass meeting of unemployed had rioted in Church Square.

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50 The political temperature had been rising steadily since it became known that Responsible Government would formally be granted the Transvaal early in December. Het Volk arranged its Annual Conference at the same time, declaring its policy in forthright terms. (Of equal importance in the inscrutable Afrikaner manner was the sending of a cable to Paul Roos’ Springbok Rugby Team for the first time playing in England: ‘Congress of Het Volk proud of your victories’ which was agreed to great applause.) The Party’s policy included many proposed laws to foster Agriculture by various measures of which ‘more efficient and sympathetic coöperation between the Agriculture Department and the rural population’ was prominent. Gray and his Veterinary Department were hated and reviled for their rigid imposition of the East Coast Fever regulations and Theiler tended to be tarred with the same brush. The farmer-delegates were loud in their bitterness and complaint. ‘The vets simply played with other people’s property’, they said, ‘the regulations were designed to hinder, not help the farmers.’ Even D. J. E. Erasmus pronounced that it was not the regulations but the way they were applied that was objectionable. If a calf died, a whole district was put into quarantine. Angry men demanded to see Lord Selborne. Significantly a few days later, the quarantining of Pretoria and district was lifted and for the first time in nearly three years, ox wagons were again seen in Market Square.

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53 Politicians of all persuasions were on the stump, making full capital of the country’s real and supposed ills in wild flights of rhetoric. Smuts was alleged by the hostile *Pretoria News* ringingly to have addressed the arme burghers encamped on Meintjes Kop in bitter terms – ‘They knew an Agricultural Department had been established but there was a woeful lack of return for the enormous expenditure and that was because there was so little sympathy between an army of experts and a people who were not used to being driven. It would be different when the officials were dependent on the people and could be kicked out if they did not give satisfaction.’ It boded ill for Theiler and his colleague scientists. His friends took note and bided their time. Meanwhile it became known that Adam Jameson was leaving the service on completion of his five-year contract. Under a new Government there might be other changes.

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Het Volk, Progressives, a National Party (the erstwhile 'Responsibles'), Labour and many Independents contested the Election with mounting intensity in the New Year. On the 15th January 1907, the America entomologist C. B. Simpson based at Daspoort died of enteric. A few days later, Sydney Dodd, similarly afflicted, was carried off to hospital. Fanned by the Press, panic was produced in the dying Government. Typhoid and enteric were as usual endemic in Pretoria. Simpson might have been infected anywhere but fingers pointed relentlessly at Daspoort. The town's M.O.H. had condemned the site and ordered its immediate evacuation. Its Health Committee described the laboratory premises as 'a pestilential spot'. Regardless of future plans, the Bacteriological Institute must at once be removed. The responsibility lay with the Agriculture Department and the harassed Smith rushed off to find alternative accommodation. 'The erection of Dr Theiler's new Laboratory is proceeding as rapidly as possible', he wrote the Pretoria Health Committee on the 24th January, 'and in the meantime, we are endeavouring to procure quarters for him elsewhere in order that the site now occupied may be abandoned at once.'

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His first proposal to Jameson was that it be transferred to the South African Constabulary Depôt on the Pretoria Town Lands and Theiler went at once to inspect it, encountering such strong objection from the S.A.C. officers and Garraway, Pretoria's veterinary officer, that the proposal was dropped. Smith then suggested approaching Lord Selborne for accommodation at the military base at Middelburg, then being dismantled and sold (Smuts bought the wood-and-iron Officers Mess for £600 and re-erected it as his home on his Doornkloof farm at Irene). The Cantonments were 95 miles by rail from Pretoria and as impracticable as Smith's further idea of utilising Sammy Marks' nearer Hatherley Distillery which had been bought by the Government. In the turmoil of the approaching Election, the Executive Council could take no action beyond speeding the work at Onderstepoort, Theiler, distressed by the death of a close colleague, the dangerous illness of Dodd and the unsavoury reputation of his Institute, continued his work under a cloud. The Ermelo Experimental Station would have to wait. Sydney Dodd recovered and, taking six months sick leave, never returned, preferring the safety of Queensland in Australia.

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In high excitement, the Election took place on the 20th February 1907. Het Volk, led by the conciliatory Botha ('it was always the Boers who had to conciliate' while the British stood their ground, wrote the bitter Kemp) won an absolute majority increased by the support of the 'Responsibles'. Many of Theiler's old friends in the Volksraad were returned - General Schalk Burger, General Koos de la Rey, General D. J. E. Erasmus (unopposed at Wonderboom), R. K. Loveday and Botha himself who had fought for an Agricultural Department since 1892. Selborne sent for Botha. They were in good rapport but Botha needed time before he named his Cabinet. Smuts had a claim to the premiership. Theiler and others speculated whom their new Minister might be. F. B. Smith, immersed in his creative departmental work wrote exultantly on the 3rd March to Basil Williams (now in England but an early member of the Kindergarten entrusted with Education) - 'I am getting some splendid buildings put up for Theiler on a farm near Pretoria. It will be the best tropical bacteriological station in the world.'

The next day, the Cabinet was officially announced:
Prime Minister and Minister of Agriculture - General Louis Botha
Colonial Secretary - General J. C. Smuts
Attorney-General and Minister of Mines - Jacob de Villiers
Colonial Treasurer - H. C. Hull
Minister of Lands and Minister of Native Affairs - Johann F. B. Rissik
Minister of Public Works - E. P. Solomon
Selborne assembled, thanked and dismissed the previous legislators and the new Cabinet was

sworn in by the Chief Justice. Within three weeks, Botha would be leaving for England to attend the Colonial Prime Ministers Conference in London. Smuts would administer the Government for him. In the intervening few days, only the most urgent matters could occupy them. One of them was spent at Daspoort.

61 Theiler had little notice when, on the 9th March 1907, the Prime Minister accompanied by General Smuts, F. T. Nicholson, secretary of the Transvaal Agricultural Union (and later allegedly appointed Botha's private secretary) and E. Ross Townsend, secretary to the Rhodesian Minister of Agriculture (for whom Nicholson probably translated Botha's habitual Dutch) arrived at Daspoort where Smith and Theiler awaited them. The visit was official and Botha came in both his capacities. Theiler and his work closely affected the new administration. There was also the current notoriety of Daspoort. More money would certainly be needed before Smith and Theiler's joint dream could be realised at Onderstepoort.

Theiler had prepared a careful tour beginning with the exhibition of microscopic slides of the bacteria causing the principal stock diseases. He explained how Equine Biliary had been combatted and how his success in immunising mules against Horse Sickness was being extended to horses. The party knew of the measures taken against East Coast Fever and Theiler told them he hoped to find a cure for the disease itself. He could protect sheep against Blue Tongue with a vaccine and cure them with a serum. He dealt with other diseases and demonstrated the grisly collection of bottled organs afflicted with Glanders, Osteoporosis, Tuberculosis, etc. He showed them his tick-breeding section and the smallpox lymph production department which supplied massive amounts to the Cape and other Governments at 2d. a tube and yet made a profit of £4,000 in 1906. He told them of the work Frei would be doing in producing anti-Rabies vaccine and investigating diseases, and of the tasks for which Dodd had been imported. He showed them such of his new equipment as he had been able to instal (Simpson's entomological laboratory had immediately been transferred to an office in Pretoria and there was now more space) and he expounded the wide field that would open for productive research when the new laboratory came into operation at Onderstepoort.

62 The clear blue eyes of Smuts and Botha surveyed it all, weighing the work that Theiler could do against the country's future. The man must be backed; but they told him only that they were greatly pleased with what he had done and was doing but regretted that it should have to be accomplished under such unfavourable conditions. In his bold curlicued hand, Botha signed the Visitors Book followed by the small precise signature of J. C. Smuts. It was Theiler's first official meeting with the men who would ordain his future. 'It may be mentioned', the *Pretoria News* reported, 'that a new site for the Bacteriological Institute has been secured two miles beyond Wonderboom and it is hoped that sufficient funds will be available for immediately proceeding with the necessary buildings.'