

AMBASSADOR AT LARGE 1920-1924

AT THAT POINT in time (1920), the volume of work accomplished, the institution of meticulous procedures and exhaustive experimentation recorded in highly-detailed and commanding published Reports, the utilitarian success of the results obtained and the sheer charisma of the one-handed man were sufficient to ensure Theiler a notable place in Veterinary Science and the unspoken gratitude of his adopted country and others.

In his person in the early days, he had significantly diminished the obdurate resistance of the boere to scientific treatment and eased the way of the veterinarian. In more cognisant circles, he had made his case for facilities for scientific research. Through continuous private study and experiment, he had achieved a knowledge and expertise far beyond his original training and a conviction and determination impressive to a succession of administrations. Onderstepoort, the largest and best equipped veterinary research institute in the world, stood as testimony. Shortly it would become the only Veterinary College in Africa.

1 The country, its officials exulted, was free of Rinderpest, Lung Sickness and Foot-and-Mouth disease. Swine Fever, Mange, Glanders and epizootic Lymphangitis appeared infrequently. The causes of East Coast Fever, Red Water, Gall Sickness, Blue Tongue and Wire Worm in sheep, and other diseases – even Gal-Lamziekte – had been identified and treatment successfully applied. Other obstinate afflictions were succumbing to investigation. The vitiating factors in animal husbandry had been engaged and the economic situation taken in hand. ‘Worth millions of pounds every year to the country’, officials pronouncement ran, ‘these discoveries have now rendered possible the keeping of animals in parts admirably suited for stock which formerly could not be used, and generally have been the main factor in the gratifying progress in the livestock industry which is of such moment to the Union.’

2 Without changing course, Theiler now widened his horizon to give more extensive attention to veterinary training and to developing the positive aspects of his work. The animals saved from disease could be more fully exploited to economic advantage. To his formidable armoury of disciplines he must add bio-chemistry, plant physiology, toxicology, nutritional science and specialised pathology. He must also find the personnel to practice what he had begun to preach. Much in post-war Europe cluttered his aims.

3 The ‘old man’ was feeling his years. On the ship he had been too tired and relaxed in mind to read the books he had brought to study and even to remember the number of his cabin. In London, there was a joyous family reunion with Margaret, happy in her physical culture training; Hans, still hampered by fever and in poor shape for completing his qualification courses (though earlier favoured by Fellowship of the R.C.V.S. Student Association for a thesis on ‘Veterinary Service in the East African Campaign’); and Max, also hampered by his recurrent attacks of acute pain, contemplating transferring his attention from a future in medicine or surgery to research in tropical diseases which particularly interested him. London still suffered post-war stringencies and high costs. Theiler gave himself only four days to transact his varied business, thinking it ‘better to clear out before I was bankrupt’. He called on the South African High Commissioner Sir Reginald Blankenberg to arrange the financing through Swiss banks of his heavy purchases of equipment and met as many of his old friends as he could. At the Lister Institute, he was saddened to find Sir David Bruce (chairman of its governing body) very much aged. ‘I think he is about finished. He suffers from bronchitis and cannot longer stand the English winter.’ Bruce and his lady immediately left for Madeira.

8 The terrible effects of the Great War were everywhere evident in London – shortage of food, ‘Government Sugar’, ‘Government’ this and that in unrefined products, limited stocks of clothing, poverty, beggary, the war-wounded in rags seeking alms in the street. England had borne the brunt of the war but now the Empire must pull together to extricate them all from the economic consequences. Grandiose plans were being drafted in Whitehall and steps would soon be taken to marshal joint forces of rehabilitation.

The Theilers moved rapidly to Switzerland, their heavy luggage lost behind them at great inconvenience to Arnold. They took lodgings in Berne, dealt with their families and Arnold plunged into the winter semester at the University whilst Emma helped with his voluminous correspondence relating to the equipment of the new Veterinary College and laboratories. Every week he wrote to du Toit who answered likewise. There was difficulty over the buildings. Construction would not begin until December. Anthrax was still bad. Kind, in charge of making vaccine, begged for special flasks and virulent strains from various institutes. Certain chemicals were urgently needed. Mettam had accepted appointment as Professor of Veterinary Anatomy at the new Witwatersrand University. Lounsbury had tried to dominate the Nagana affair. Curson was being sent to Zululand to combat it. Reports, news, gossip and endless demands while Theiler attended his lectures ‘taking in as much as will go in . . . but I am no longer so young to stand all this great effort without its leaving some marks on me’. In the bitter cold, he worked as a student from 8 a.m. to 12.30 and from 2 p.m. to 7 while dealing with his commissions in staff and apparatus and accepting invitations to lecture veterinary and other bodies anxious to hear their successful compatriot.

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12 Viljoen applied himself with equal vigour at the University and went with his wife to the concerts and excursions to which the Theilers invited them. E. M. Robinson was likewise seeking his Vet. Med. doctorate at Berne University and H. H. Green would soon depart from Pretoria to study the latest advances of Bio-Chemistry in the U.S.A. and England. W. H. Andrews was studying advanced Physiology at London University. Other staff would follow later for specialised training. Gertrud struggled with Strongylids and Nematoda at Neuchâtel, having mastered the French language. When Christmas came, the whole Theiler family foregathered for winter sports but it rained instead of snowing. It was the last time that all of them were together. Arnold had made good his promise of responsibility for Marie’s daughter Klärli, an engaging adolescent, and now proposed that she return with them to South Africa. Klärli was delighted.

A treadmill developed which was hard to sustain. The ‘old man’s’ schedule of University classes, negotiations with suppliers of equipment, consultations with his academic colleagues as to whom he should recruit for his staff, advice to the nervous Viljoen and Robinson on their theses, endless letters and the frustrations wrought by distance (seven weeks would elapse before a reply could be received from du Toit), and finally the clamant demands from his admiring colleagues for lectures by their famous countryman, all bore heavily on him but were zealously discharged. It was perhaps the measure of Theiler’s ‘vanity’ that he refused no speaking engagements and took meticulous trouble to prepare his texts.

13 The first lecture was given to the Botanical Society in Berne on the 10th January 1921 on ‘South African Plants and Diseases’ supported by slides provided by Pole Evans (awarded the C.M.G. a few days before). Theiler found it difficult to speak in Hoch Deutsch but had a great success, repercussing on Pole Evans whom he asked to send plants to his new botanical friends. Thereafter a long programme of more arduous engagements lay before him:

14 19th February – East Switzerland Veterinary Association, Zurich (where he caught a cold and ‘had a rotten time in bed for two days, feverish and ill’ but went to Baden in Aargau to recover);

26th February – lecture at Lucerne (hoarse and coughing);

5th March – Swiss Natural History Society, Berne;
 19th March – Berne Veterinary Association;
 18th April – Colonial Office, London (Animal Diseases Research Committee);
 20th and 21st April – lectures at Cambridge University;
 May – Geographical Society at Berne
 Oberlander Veterinary Association at Spies
 Solothurner and Basler Veterinary Association at Basle
 25th May – International Veterinary Conference in Paris
 15th June – Waadtlander Veterinary Association in Lausanne
 3rd July – District School Assembly at Frick

15 He took heart from the progress of the College buildings (Gilles de Kock, working hard at
 16 Anatomy in the Postmortem Hall to prepare for professorship, wrote him that T.U.C. were
 'very busy building the Dissection Hall but I doubt whether they will be ready for us in March' –
 17 he would lecture on Osteology and Histology) and du Toit wrote him constantly about equip-
 ment. The High Commissioner was being exceedingly difficult, refusing to authorise expendi-
 ture and denying that Theiler officially represented his Government. Not until Viljoen went to
 England to meet his wife returning from a brief visit to South Africa could he be argued out of
 his position and induced to credit Theiler with £12,500 at a Berne bank. Viljoen himself spent
 £1,000 on incubators, centrifuges and other apparatus in England. By the end of May 1921, du
 Toit had received between 200 and 250 crates and stored them unopened under injunction from
 18 Theiler that 'the wood would come in very useful for sheep boxes at Besterput'. Hardship was
 everywhere and Onderstepoort suffered from increasing financial stringency. Even the cherished
 19 'Pica Survey' that would reveal the conditions under which the craving arose, was perforce
 abandoned.

Theiler kept au courant with every detail of his distant domain. Butler, now deputy-mayor of
 Vryburg, sent him the *Northern News* with reports of Armoedsvlakte and, in addition to lengthy
 20 letters, du Toit sent departmental papers. King, Theiler's secretary, dealt with his personal cor-
 respondence, writing him in March that the Senate of the Transvaal University College had
 offered him appointment as its Rector (or principal) and advising him to accept as it entailed little
 and was good for the profession. Theiler was flattered but refused, wishing first to establish his
 Veterinary Faculty and then to retire to write his long-contemplated 'Handbook on Colonial
 Veterinary Medicine'. Other members of his staff wrote him. A general election had been held
 on the 21st February and foreseeing doom in already strained circumstances, Theiler hoped that
 21 'old Jagger will not be made Minister of Finance'. Smuts and his South African Party were con-
 vincingly returned with an overall majority of 79 against Hertzog's National Party's 45 seats. A
 steady course seemed assured for a distressed country, now enduring excruciating drought. At
 long last Smuts appointed a single Minister of Agriculture, none other than its earlier fiercest
 22 critic Sir Thomas Smartt – 'I think he will now shout less than before', Theiler wrote du Toit.

With most of his purchasing done (at the sacrifice of his University spring vacation), Theiler
 could now turn his attention to recruiting staff. Better weather had done nothing to improve his
 health or restore his spent energies. His uninhibited public lecture schedule imposed exacting,
 sometimes emotional excursions every two or three days – to Zurich, to Aarau whose High
 School had prepared him for University and whence he had made the long walks over the hills to
 23 Frick to see Emma, to Lucerne and, on the 5th March 1920, the great occasion of his address to
 the Swiss Natural Sciences Society at Berne. He had devoted special care to presenting his mater-
 ial in logical succession; but he still had a cold. In a sense, his appearance before this august
 scientific body must be a vindication of his earlier reputation as a student. The academic elite
 honoured him with their presence, all the leading professors including Sahli of the Medical

Faculty crowding into the Zoological Auditorium. The Society had never before commanded so large an audience, Emma among them and Gertrud who had come specially from Neuchâtel. Rising to the occasion above his illness and the fear of making gaffes in Hoch Deutsch, Theiler had a succès fou. 'The applause was very strong', he wrote Alfred, 'Sahli came personally to congratulate me. I was in very good form, if still somewhat suffering from a cold'. (Gertrud had demurred at reading his speech for him.) He spoke on parasites and animal diseases in South Africa, later published in the Society's journal. It was a relief when it was over. One more lecture to the Berne Veterinary Society on the 19th March and he would be free for a month to devote himself to his own work before leaving for London and Cambridge.

24 Typically the honour and the 'being wanted' in his homeland produced in Theiler, not satisfaction but a revival of the dichotomy which he never conquered. A week after his triumph, he wrote at usual length to du Toit on their mutual concerns. 'In conclusion', he stated, 'I must tell you that I really am homesick for South Africa. I have nothing to complain about Berne, even the weather is unusually excellent but I am not so happy as I used to be on former occasions. I cannot tell you what it is.' His lecture a few days later was 'loudly applauded' and the Berne veterinarians made him an honorary member. Theiler was pleased but the voice he truly wanted to hear gave him greater pleasure – MICROBES SEND YOU HEARTIEST GREETINGS AND EVERY BEST WISH FOR 26th, the cable read. Onderstepoort had remembered his 54th birthday – a rite that was performed wherever he might be until his death. In thanking du Toit, Theiler wrote – 'Our time is drawing shorter and it will be with not much regret that I return to South Africa.'

26 When du Toit got his letter, he was only recently returned from representing Theiler on the Botanic Survey Advisory Committee in Cape Town and having discussions with Smartt, his new Minister. 'Just before leaving Cape Town', he wrote, 'I had an interview with General Smuts who made the appointment the previous night. He wanted to know all about Onderstepoort, how the work and the students and the buildings were getting on. He laid particular stress on the point that we should not take too many students. He enquired after you, how you were getting on in Switzerland and when you were returning. He still seems to take a keen interest in O.P. and again promised to help me if ever I needed it.' Smuts would soon be leaving for the Imperial Conference in London in June when the lines of Theiler's future might well be drawn.

27 F. B. Smith, privy to privileged sources of information, had thrown some straws in the wind. The English assignments he had made for Theiler related to the general move to increase the productivity of the Empire. On the 18th April, he was to give evidence to the Colonial Office's Animal Disease Research Committee and on the 21st, to lecture at Downing College, Cambridge on 'Veterinary Research in South Africa' and attend a formal luncheon. Smith had openly stated that the Colonial Office had enquired through him whether Theiler would accept veterinarians for training for work in the Colonies. 'I replied they would be welcome and that we would give them special opportunities for training in their new jobs. I believe we have in Smith a good supporter of O.P. who pushes the new Faculty for all he is worth', Theiler wrote du Toit (who was being similarly pressed from another side – the Transvaal Administrator, A. G. Robertson, brought the Governor-General of the Belgian Congo, G. G. Lippens and his officials to inspect the Institute and to enquire in depth about the new Faculty. He wanted all Belgian Congo veterinarians to spend some time there.) 'I believe', Theiler continued, 'that having me lecture in Cambridge was part of his scheme to draw attention to the South African Faculty of Veterinary Medicine.' It was all very gratifying; but the old man could not forbear to remark – 'he arranged all this as if he were still my chief' and went on to denounce the endless work that weighed on him without prospect of holiday.

28 He was dealing now with recruiting staff and kept several Swiss in mind as well as attempting

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30 to persuade Kehoe to leave Ireland and become a professor at the new College. Du Toit warned him that there was feeling against the Swiss. There had been criticism of the College becoming 'too Continental' and men attached to the new Johannesburg University had slung mud at the foreign element. (The South African Veterinary Medical Association duly protested to the Government against 'the preferential treatment of Swiss and German veterinarians which they regarded as an insult to their members'. The Public Service Commission had inadvertently advertised a higher salary scale than to local men - it was due only to special research officers.)

31 Theiler stuck to his guns and fearing failure with Kehoe, employed Dr W. Steck of Berne as lecturer in Pathology. For Plant Physiologist, he made enquiries about the plump botany student who had shared his studies and excursions at Basle in 1913. Marguerite Henrici, now touching 30, had proceeded from the study of botany, chemistry and zoology to specialising in Plant Physiology under Professor Gustav Senn at Basle where she was awarded a doctorate *summa cum laude*. Senn himself worked in the summer months on the transpiration, respiration and assimilation of Alpine plants (precisely what Theiler wanted for South Africa's arid pasturage) with Henrici as his private assistant. She was officially employed as a research worker at the Botanical Institute of Basle University when Theiler turned his beguilement upon her. His charisma, enhanced since 'the most important day in my life' when she had first met him, was irresistible and she accepted his invitation to join his staff. Unforthcoming Treasury authority and other difficulties prevented her departure for 18 months.

32 Some surcease in Theiler's wearying schedule came in April when a Miners' Strike in Britain threatened extension and all Smith's arrangements were cancelled. 'He will be furious', Theiler wrote, inwardly rejoicing. The news from South Africa was also bad. Deepening depression entailed frustrating economies. 'I do not remember any previous period when it was so difficult to get things done', wrote King, an experienced civil servant, and du Toit constantly complained of hampering restrictions. One hopeful sign was the continued construction of the gigantic fertiliser factory at Firgrove at the Cape which would supply all the phosphates that the cattle industry would require.

33 Theiler was employing his time studying the lecturing methods of Swiss professors, buying cameras for fieldwork and preparing himself for the lectures he would have to give in May. The High Commissioner had authorised him to attend the International Veterinary Conference in Paris as the official South African delegate. His correspondence was still enormous. In addition to his own affairs, he had become the consultant sage to all who had ever worked for him. The disaffected D. T. Mitchell had asked for support for his application to the India Office for appointment as biologist to the Veterinary Research Institute at Muktesar. Theiler wrote that he was probably the most suitable man that he could offer at the moment. Even Montgomery sought his advice on what equipment he would need for East Africa. In all the stress and strain and mounting exhaustion, he had one 'very great joy' - an official document signed by Professor Arbenz reached him conferring honorary membership of the Naturwissenschaftlicher Verein of Berne, the prestigious body he had recently lectured. It gave him particular pleasure and he referred to it again and again in Switzerland and later in South Africa. His own country was honouring him - 'Let them all come!' he exclaimed vaingloriously.

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38 A sudden fall of snow throughout Switzerland early in May with freezing temperatures badly affected a tired man struggling to attend University lectures and botanical excursions while delivering addresses to veterinary societies. Theiler's right lung showed signs of pleurisy and his symptoms included 'a very bad appetite and a bad temper as well'. Emma suffered but was powerless to prevent his maintaining his schedule. He managed to address the Geographical Society in Berne and to travel to Spies and Basle for his lectures to veterinarians. Then he was forced to take to his bed with threatened pneumonia. He could write no more than a postcard to

du Toit on the 16th May. A week later he felt well enough to get up intermittently to attend classes; but his doctors forbade the Paris International Veterinary Conference. Theiler duly advised the High Commissioner that illness prevented his representing South Africa. Blankenberg cabled du Toit and threw all Onderstepoort into confusion. As du Toit cabled back for further news, Theiler went on a recuperative excursion to the Jura Mountains. Sitting at the Champs du Moulin on the 29th May, Arnold, Emma, Gertrud, Phillip and Gladys Viljoen, and E. M. Robinson signed a postcard of false gaiety and sent it to du Toit.

39 The expedition was too much for the old man. It was too strenuous and exhausted his resources. The pleurisy returned with a high temperature and Theiler confessed to feeling 'really ill'. He longed to return to South Africa but felt bound by his uncompleted work and still struggled to get up for his University lectures. On the 9th June, he allowed himself to be examined by Professor Sahli who, knowing his man, advised him to go to a lower altitude to recuperate but 40 permitted him to continue attending classes. Emma waxed cynical about Sahli's diagnosis of 'Pleuritis, Bronchitis, Pharyngitis and other Itises' and could do nothing to stop her husband's 41 daily expeditions to the University. Pneumonia made him weak and miserable, he wrote du Toit, and he went to bed immediately he returned from classes. There he spent his feeble energies on trying to put Robinson's thesis into optima forma 'if he is to come back with a degree'. Viljoen needed no such assistance.

42 The old man had taken a fearful toss but claimed to have rallied. His devoted staff wrote him almost hysterically, Gilles de Koch pronouncing: 'Your presence in South Africa for a number of years is absolutely essential - only a strong hand can steer us now.' Theiler knew it was true, despite the loyal protestations that 'Dr du Toit is excelling himself in your absence'. A reed on which he was relying showed signs of breaking. Henry Green, conscientious and intense, returned 43 from the United States to London and wrote that he was on the verge of a nervous breakdown. He had been ordered rest but would certainly collapse from worry if he did not get on with ordering his equipment and preparing for his new tasks. His personal pleas to Kehoe to return had also been rejected. By the end of June, Theiler was sufficiently recovered (though plagued with buzzing in his ears) to conclude his purchasing commitments of drugs, chemicals and photographic apparatus and even to travel to Lausanne to give a lecture in French to the Collège Vaudois. He wanted also to honour his obligation to the Frick School. Viljoen's dissertation was accepted by the University and there were small celebrations with the new D. Vet. Med. and his wife. Robinson's was accepted in the middle of July. Theiler could somewhat 44 slacken his pace and relax with his family, travelling constantly through Switzerland to make his farewells. There remained only the disposition of his children.

It was Arnold's manner to plan everything and then dragoon the wary participants into doing what he had ordained. His orderly mind seldom took cognisance of human nature which, kind 45 and helpful though he were, he never fully understood. When the frail and exhausted Max came to Switzerland to relax, he found that Arnold expected him to leave the next day on a strenuous walking tour, meticulously planned. Max, a robust character, compromised by agreeing to do it by bicycle. Arnold had long lost influence with his second son who knew his own mind and intended following his own interests and inclinations. He now announced that in 1922, he would 46 enrol in a six-month course to obtain a diploma at the London School of Tropical Medicine, recently established by Lord Milner who, serving briefly as Secretary for the Colonies, had 47 characteristically promoted research. Hans, the fever-ridden irresolute war veteran, remained a 48 problem. Viljoen who had visited him in London at Arnold's request, found him making heavy weather of his veterinary studies and was embarrassed in reporting to his father. Typically Arnold made a plan in a situation demanding very careful psychiatric analysis, unavailable at 49 that time. Hans was to go for a year to work on a farm at Buholz in Switzerland to recover his

health and mental capacities and perhaps become a farmer. Alfred would take him into his home and watch over him. Hans began his bucolic labours before his parents left and telegraphed them – ‘Am blistered, aching and tired but otherwise well’. Arnold considered the problem fixed. Gertrud, toiling at Neuchâtel and Margaret, soon to qualify as a teacher of physical culture, presented no difficulties. The whole family had been happily reunited in Switzerland. Now Emma and Arnold were returning to a home empty of children but solaced by the quiet presence of their niece Klärli.

50 Frightened by his brush with pneumonia – the first illness he had ever had – Arnold now doubted his capacity to deal with his demanding dual duties. ‘I am afraid’, he had written du Toit, ‘that I have been hit too badly to be the same man I was before I left South Africa.’ To
51 Alfred he confided on the verge of departing – ‘I have a certain fear about my new work as I feel that I am not as strong as I was for which my age is for the most part to blame. Still I do not
52 lack the will to undertake this work and carry it out.’ On the 26th August 1921, Arnold, Emma and Klärli Mettauer, Dr P. R. and Mrs Viljoen, and Dr H. H. and Mrs Green sailed from Southampton for South Africa on the creaking *Walmer Castle*.

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53 It was noticed at once in Pretoria that Sir Arnold ‘had not yet recovered from the effects of an attack of pneumonia and pleurisy which he contracted in Europe’. He was pale and drawn but resolutely confronted greatly changed circumstances. Stripped of all but a few items of P.W.D. furniture (Arnold was unwilling to replace the Theiler pieces that had been sold until his future were clearer), ‘The Residency’ itself was a bleak place where Klärli wandered about, bored, he
54 feared, ‘by being alone with two old people who speak as little as possible’. Drought and depression ruled a scene ripe for later calamities in locusts and outright revolution. Retrenchments, privations and disaffection among most sections of the community were routine ingredients of the moral climate.

Everything was different. There was a new Governor-General, the ultra-regal Prince Arthur of
55 Connaught and his disdainful lady. The Theilers went dutifully to their first garden party and to subsequent dinner parties but declined the balls. There was a new Minister of Agriculture, Sir Thomas Smartt, proudly announcing that he had been a farmer since 1884 (at Britstown in the
56 Northern Cape) who paid his first official visit to Onderstepoort accompanied by Imperial guests from India two weeks after Theiler’s return. (Visitors from all parts of the world now flocked to the famous institute, few bringing joy to its restored head with the exception of a distinguished
57 party from the Robert Koch Institute in Berlin – Professor F. K. Kleine who had accompanied Koch to Rhodesia to investigate East Coast Fever in 1903, Drs R. Fischer and H. Ockelmann. Local celebrities also came in number but not the Governor-General.) There was a new Secretary
58 for Agriculture in the colourless P. J. du Toit whose actions displeased Theiler and a new Principal Veterinary Surgeon replacing C. E. Gray – the veteran acolyte of Hutcheon, J. D. Borthwick whose senior staff included historic colleagues like Spreull, Power and Dixon.

There were changes among the Onderstepoort personnel. Captain Frank Veglia had returned
59 from Italy, honoured by his King as Chevalier of the Crown of Italy for his military and veterinary services and, when Mitchell left for Europe, was posted to Armoedsvlakte. M. Zschokke,
60 finding South Africa too small for so many Swiss, transferred his employment to the mandated territory of South West Africa. Drs H. Meier and R. Scharrer left on termination of their contracts; but Gerard Kind and J. Scheuber remained, recently joined by Dr W. Steck, also on contract. Du Toit had wrought diligently in maintaining research despite curtailment through
61 diminished funds. ‘Restriction of research is not in the economic interests of the country’,

Theiler wrote severely in his 1921/22 Report though compelled to cut his cloth in conformity with the prevailing pattern. His mind was more on launching the Faculty in the new year and, once du Toit and he had shuffled the staff to do dual duty, his burden was increased by preparing his lectures. He had not fully recovered. In fact, he confided to Alfred, 'I am still not well. The catarrh still sticks in the upper air passages and as soon as I lie down, the whistling and hissing begins in my ears. Sometimes I feel really unwell despite my weight and body-size having considerably increased since my return. I am simply not well despite everybody congratulating me on my good appearance.' Emma's good Swiss cooking could not touch the seat of his trouble.

On the 12th November 1921, Smuts opened the fine new building of the Agricultural Faculty of the Transvaal University College in Pretoria. Within weeks, when the new term opened in February 1922, more students would enrol for the elementary courses in Veterinary Science and the pioneering seven would proceed to Onderstepoort for the advanced studies which Theiler and his colleagues had planned. In his dual capacity, he had deployed his forces as follows:

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- Sir Arnold Theiler K.C.M.G. – Director of Veterinary Education and Research, Dean of the Faculty of Veterinary Science and lecturer in Pathology I
 - P. J. du Toit B.A., Ph.D., Dr.Med.Vet. (Berlin) – Deputy Director of Veterinary Education and Research, Professor of Hygiene, Infectious Diseases and Embryology
 - H. H. Green D. Sc. – Sub-Director of Veterinary Education and Research, Professor of Bio-Chemistry and General Bacteriology
 - P. R. Viljoen Dr.Vet.Med. (Berne) M.R.C.V.S. – Sub-Director of Veterinary Education and Research, Professor of Applied Research and Special Bacteriology
 - W. H. Andrews D.Sc. (London) M.R.C.V.S. – Senior Research Officer and Professor of Physiology
 - G. de Kock M.R.C.V.S. – Senior Research Officer and Professor of Veterinary Anatomy
 - C. P. Nesor B.A., D.Sc., M.R.C.V.S. – Research Officer and lecturer in Veterinary Medicine and Pathological Physiology
 - A. O. D. Mogg – Lecturer in Ecology and Mycology
 - P. J. J. Fourie M.R.C.V.S. (Dublin) – lecturer in elementary courses at the Transvaal University College
 - M. W. Henning M. R. C. V. S. – ditto
- Onderstepoort*
- Research Officers – G. A. H. Bedford F.E.S.
 - P. J. van Zyl B.A., Ph.D.
 - P. J. J. Fourie M.R.C.V.S.
 - M. W. Sheppard B.Sc., M.R.C.V.S.
 - W. Steck Dr.Med.Vet (on contract)
 - G. Kind Dr.Med.Vet. (on contract)
 - H. O. Monnig B.A., Ph.D.

Armoedsvlakte

Officer in Charge – Dr F. Veglia

Allerton Laboratory

Officer in Charge – E. M. Robinson Dr.Med.Vet. (Berne) M.R.C.V.S.

Research Officer – J. Scheuber Dr.Med.Vet. (on contract)

63 (Of Theiler's careful selection of lecturers for T.U.C., a story survived that he had asked one candidate whether he had had any experience. 'Oh yes', he replied, 'you see, I am a lay preacher.' 'Ah!' said Theiler, 'but in this, you have to speak the truth.'

64 Du Toit, Mogg, Fourie and other members of his staff had toiled at the College to prepare the first students for their specialised courses at Onderstepoort while its research officers dealt as far as they were able with Nature's usual vicious onslaught in difficult times. Anthrax and Nagana flourished while a cruel drought and monstrous swarms of locusts devastated the grazing over wide areas, severely reducing the population of sheep as well as horned cattle. Smuts described in Parliament the gravity of the situation - 'The farmers have been passing through a period of the greatest trial and difficulty . . . They could not sell their wool or their mealies or ostrich feathers - all our great staple products. The agricultural products of South Africa were practically unsaleable in the markets of the world . . . We have a country which is very largely a ranching country which is only fit for cattle and as a result of that, the meat industry ought to be one of the greatest sources of wealth for the farmers of this country. There is in fact total chaos and disorganisation.' He went on to urge the restructuring of the industry to ensure the capture of overseas markets and with it, the restoration of the South African economy. In the meat industry lay the country's salvation. It was the concern of Theiler and du Toit to safeguard its increased productivity and to promote its development.

65 The old man attempted to grasp all his nettles despite crippling reduction of funds. On the 3rd January 1922, he arrived at Armoedsvlakte with Green, Mogg and the handyman Theo Meyer. They were accompanied by Messrs Bennett and Cooper whom the Colonial Office had sent for some months' study at Onderstepoort before posting to the Lahore Veterinary College and the Muktesar Laboratory in India. A beginning had been made in Theiler's grand plan. The ubiquitous Butler noted that he looked well and professed benefit from his year abroad in new ideas and zest for his work 'but has evidently not completely shaken off the effect of his recent attack of pneumonia'. Mitchell, shortly departing for Europe to take advanced courses in bacteriology in London, Utrecht and Paris, could show gratifying, even astonishing results from the phosphate feeding with bonemeal at 3 oz. per animal per diem. Cattle developed in size and weight to the extent of 100 lbs in four months. Milk production increased by 45% and butterfat by 40% when 2 oz. were given daily to cows. Bonemeal not only prevented Lamziekte but greatly increased the value of cattle. It was then so cheap that 'a profit and loss account in some of the Armoedsvlakte experiments shows a clear profit of 300% upon the cost of treatment'. It was of course equally effective with animals in non-Lamziekte areas, even sheep and, continued
66 Theiler's annual report (written by P. J. du Toit to cover the period of his absence), 'the disease itself, by focussing attention on greater issues, will ultimately prove to have been a blessing in disguise and the expenditure upon the present investigations be reflected in the beef export trade in the Union'. Theiler warmly congratulated Mitchell and regretted the reduction in his monetary resources which cancelled the Pica Survey, prevented more experimentation and might involve reduction in salaries and retrenchment of staff.
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69 The party returned on the 7th January leaving Theo Meyer to assist Veglia. An old Daspoort and Armoedsvlakte hand, Meyer conceived the happy notion of asking the Vryburg Farmers to make good the station's financial plight by donating the balance of the Experiment Fund amounting to £55 to building a reservoir to enable certain grass experiments. Butler hotly opposed it. He said he had asked Sir Arnold before the War how he would like the balance spent and, with his mind on testing the effect of wind and the rays of the sun on pasturage he had replied that he wanted Metereological instruments. Now that such instruments were available, Sir Arnold had repeated his wish and undertaken to have a suitable tablet engraved recording the gift. The Farmers' meeting decided to seek confirmation from him. In March, du Toit came down to Armoedsvlakte with instructions from Theiler to confirm what Butler had said.

70 By that time, the old man's weakened constitution had failed to withstand the inordinate demands made on it and from early February onward, he had remained in bed. Du Toit, King and

71 others visited him to take his directions. His hand remained at the helm but it was du Toit who
72 administered all affairs. During the eight weeks that Theiler struggled to recover his strength,
the accumulating calamities reached their climax in civil war. While the Transvaal Administrator
A. G. Robertson opened a desperate conference of the Agricultural Union to devise means of
finding markets for wasting farm produce, a strike of coal miners on the Witwatersrand became
militant and widespread. Armed commandos composed of Afrikaners as much as English-speak-
ing, were formed along the Reef, the Defence Force stood by and aircraft practiced bombing
outside Pretoria. By the middle of March, Colonel H. Mentz, now Minister of Defence, pro-
claimed Martial Law and Union police and troops waged open warfare against miners and dis-
sidents in Johannesburg and along the Reef. The newspapers carried casualty lists along with
pitiful accounts of the victims of depression. There was no work in the towns and the farmers on
their lands starved with the rest, few having the heart or the means to attend their Association
meetings which fell dangerously into abeyance. Herculean efforts would be needed to drag
South Africa out of the morass of paralysed industry and agriculture. Smuts' Government bore
a Sisyphus burden.

73 As the 'Red Revolution' ended, Theiler got shakily to his feet, unable to discharge his re-
74 sponsibilities in both Veterinary Research and Education. His doctor, like Sahli, prescribed a
lower altitude and complete rest. He had no alternative but to comply. On the 6th April 1922,
Arnold, Emma and Klärli left for Illovo Beach on the Natal south coast. They did not return
until the 14th June. Du Toit, in the fullness of his powers, ran Onderstepoort and lectured the
seven pioneering students in their first specialised year.

75 At a time of desperate depression and economic stagnation with graduates and professional
men glad to do pick-and-shovel work and farmers so penniless as to be unable to pay the pittance
for vaccines to protect their stock, there were few rays of light. Great efforts were being made to
break the grip of world-wide slump. Smuts already knew of grandiose plans to stage a 'British
Empire Exhibition' at Wembley in 1924. Publications in which South Africa would participate
were also being drafted. Locally a little heart was given the cattle breeders - in a brave experi-
76 ment, the Union Castle Line transported free of charge a consignment of pure-bred Friesland
cattle for auction at Slough in England. They fetched high prices to the astonishment of all con-
77 cerned and it was proposed to continue export. Both Theiler and now du Toit vaunted the pros-
pects opened by enlightened feeding and, curtailed as it was by lack of money, Onderstepoort
78 continued lengthy investigation into the optimum methods.

Nothing was allowed to impede the training of veterinarians, recruits being blandished by
sizeable Government salaries if they qualified and the lecturing staff, now enlarged, being en-
79 couraged to increase their own qualifications. In June 1922, Mogg went abroad for a year's
80 specialised study of Botany followed a few weeks later by Gilles de Kock for deeper instruction
in Anatomy and the acquisition of a D.Vet.Med. Science degree. Already in Europe on six
months leave was Pole Evans who had astounded his colleagues and friends by marrying his
81 long-time mycologist, Mary Thompson F.L.S. Always a frequenter of Government House and
ministerial residences, Pole Evans was a particular friend of the botanist-premier and the cere-
mony had taken place in his Cape Town house under the aegis of Mrs Smuts (the couple sub-
sequently took up residence at Irene near Smuts' home at Doornkloof). Theiler had designs on
his returning colleague.

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With his 'zest for work' fully restored by nine weeks' rustication and ozone, Theiler resumed
his duties in the middle of June 1922 and was immediately involved in local and imperial tur-

82 bulence. There was the unpleasant affair of Gerard Kind which had been simmering since his return from Europe when, for the first time in history, Anthrax had infected the stables at Onderstepoort and one of the staff had contracted it. Du Toit blamed Kind for careless methods in preparing and packing the vaccine. Good if bad-tempered worker though Theiler claimed him to be, Kind was dismissed at the end of his three-year contract. He took the Minister to court for unpaid salary and Theiler was compelled to join du Toit in testifying. Much back-stairs vituperation was adduced as evidence which did neither Onderstepoort nor the Swiss any good at a time when Theiler had more momentous affairs on his mind.

83 The phosphorus-feeding experiments were proving highly rewarding but old enemies continued obdurate. In September, Theiler summoned Robinson from Allerton and Curson from the Nagana experiment station at Ntombanana (near Empangeni in Zululand) to concert an attack on the endemic disease. He devised a number of baiting methods to catch tsetse flies in various areas to establish their relation to vegetation, the presence of big game, humidity, temperature, etc and sent them away to record results. He found time to write to the moribund Vryburg Farmers Association about the anemometer (there were very few wind-measuring instruments in South Africa, he said, and Armoedsvlakte would become an important meteorological observatory) and to instruct King to commence the laborious procedures of ordering it, having the plaque affixed and arranging with the P.W.D. to build a solid stone platform to mount it. With Green he went to Armoedsvlakte in October and regretted that drought had interfered with the grazing experiments and that lack of finance would prevent much further investigation. Thence to Ermelo to examine an outbreak of Stijfziekte. There were his Faculty lectures and a growing stream of distinguished visitors including the ex-prime minister of Belgium, General Carton de Wiart and his suite, anxious about veterinary care in the Congo. Shape would soon be imposed on his cherished ideal of an Imperial Veterinary Institute. 'Throughout the year (July 1922/June 1923)', he wrote, 'inquiries were received from various sources concerning the facilities offered to foreign graduates for specialising in subtropical veterinary science and the question of running a special postgraduate course for overseas veterinarians is now under consideration. There is no doubt that with proper encouragement, Onderstepoort will become the recognised centre for the study of tropical and sub-tropical veterinary science in the British Empire.'

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87 Emma had again made a home of the house where Klärli Mettauer happily diverted herself as best she might. The family now were widely distant. In September, Gertrud submitted her thesis (in English by special permission but with a French oral) on 'The Strongylids and Other Nematoda' to the University of Neuchâtel and, now an addict of Helminthology, intended going to Liverpool to continue work on Nematoda under Professor Warrington York. Arnold read her dissertation with approbation, seeing himself worthily reflected in his diligent daughter and anxiously awaiting the academic verdict. At the same time, the maverick Max was making his hectic farewells in London, having obtained the diploma in Tropical Medicine and Hygiene. A co-student in the six-month course had been Dr Oscar Teague of the Harvard Medical School who had secured appointment for him to the staff of its bacteriologist, Dr Andrew W. Sellards. Max sailed for the U.S.A. early in October and, still plagued by periodic pain in his diminutive frame, finally found direction in his career. Hans however had lost it. Farming at Buholz had no attraction for him and Arnold had to face the recurring worry and expense of his elder son's enduring desire to qualify as a veterinary surgeon. Before long, unstable as ever, he was back in London at the R.C.V.S.

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90 Joy now entered the Theiler household with the arrival of Marguerite Henrici in November 1922. Arnold had made elaborate preparations for her coming. Escorted from England by the returning Pole Evans, she was met at Cape Town by Theiler's botanist friend, the German-speaking Dr Rudolph Marloth who put her on the train to Pretoria where Theiler himself await-

ed her at the station and took her into his home. Schwizerdutsch, ardently joined by Klärli, rang through the house. Africa in full summer heat was a new experience for the buxom botanist whom Theiler allowed 10 days to acclimatise herself and explore the wonders of Onderstepoort before taking her, accompanied by King, to arid Armoedsvlakte. Over a weekend, she surveyed its parched vegetation with professional interest. At some stage, Theiler told her, it became phosphorus-deficient and caused abnormal craving for carrion in cattle resulting in Lamziekte. She must examine the physiology of the plants that were grazed and determine which features influenced the process. Butler stood by, marvelling that a lady should be entrusted with such work.

She went back to Pretoria for final preparations and began her work at Armoedsvlakte at the end of December, at first abashed at the contrast between her secluded University life in Basle and this rude and torrid place infested with snakes, rodents and horrid insects and tended by black, brown and white men whom she barely understood. Of tough moral and physical fibre, Henrici soon accommodated herself and commenced producing a series of papers on transpiration, chlorophyll content, wilting, growth and other features of Bechuanaland grasses, some of which were published in Theiler's 11th and 12th Reports and some in Switzerland. Soon her field of work far exceeded the problems of Armoedsvlakte. She was always persona grata in the Theiler household and until the end of her long life, considered Arnold 'my best friend in South Africa'.

91 Secretly the old man or 'Oubaas' as his growing number of Afrikaner veterinarians trained overseas (P. R. Viljoen, Gilles de Kock, P. J. J. Fourie and others) called him, was bending before the blast. When Gertrud got her doctorate early in 1924, he tempered his delight that 'one of my children has obtained this academic distinction' with an urgent appeal that she relieve him of one of his grievous burdens – the care of Hans. He had taken to heart, he wrote, his son's various failures and acknowledged his many good points but he was still unable to earn a living. Gertrud must take him in hand. 'I am looking to you to see him through his studies. I am getting old and my health is no longer as it used to be. I am getting tired and I am looking forward to leaving O.P. to take up some less irksome work, to have the rest of my life an easier time than I have had in the past. But I cannot leave my job until Hans has finished his studies and is capable of looking after himself.' Gertrud shouldered the burden as she had in the case of Max and after 92 some months, transferred from Liverpool to the London School of Tropical Medicine to study Trematoda under Professor R. T. Leiper, the better to watch over Hans.

93 Theiler, supported at base by the diligent du Toit and a devoted staff, continued his routine duties throughout the country, visiting Armoedsvlakte, Ermelo and other experimental stations and immediately travelling to new outbreaks of disease. The onus was heavy enough but his attention was now diverted from his multifarious local obligations to the world at large. P. R. Viljoen could represent him at the Fifth Pan-African Veterinary Conference convened by the Kenya Governor, Sir Robert Coryndon in Nairobi in April 1924. More important tasks were allocated to his 'old chief'. The powerful move toward coördinating the Empire's efforts to extricate itself from economic stagnation was gathering momentum. Theiler's old Republican 94 friend, Leo Weinthal of the *Pretoria Press* had become, as editor of the *African World* in London a dedicated Pan-Africanist and called on him to contribute a definitive account of 'The Study and Control of Animal Diseases in South Africa' for a massive work in four volumes misleadingly entitled 'The Story of the Cape to Cairo Railway and River Route 1887-1922'. It was intended for publication prior to the opening of the British Empire Exhibition at Wembley in April 1924. Theiler produced a classic example of his gift for compiling and compounding masses of abstruse material and interpreting it in terms intelligible to the layman. It was published with an impressive portrait study of the closely-barbered author in the fourth volume toward the end of

1923 and Smuts, returning from high State occasion, could be proud when a copy was placed in his hands in London.

95 Smuts had ensured that Theiler be integrated in the drive toward the economic recovery of the Empire. An Imperial Conference of Prime Ministers preceded by economic discussion had been scheduled for October 1923 in London. Smuts who had intended pressing for Empire preference and particularly the right to export cattle and meat to England, planned a large entourage including Pole Evans. Great impetus would be given the drive to which Theiler himself would contribute. In striking recognition of his stature in the world at large which the Prime Minister fully appreciated, he had received an invitation from the Canadian Minister of Agriculture to address the Northern American Veterinary Convention in Canada early in September and another from the World Dairy Congress meeting in Washington and Philadelphia early in October which he was asked to lecture on 'Tropical Diseases in Dairy Cattle'. Theiler discussed them with his Minister, Sir Thomas Smartt. There were two issues involved: the poor standard of local stock - 'We have 9,000,000 head of cattle in South Africa', Smuts exclaimed in the House on the last day of the session, 'and they are scarcely fit for local consumption, leave alone for export' - and Theiler might learn much in better production techniques from conferences and conventions as well as visiting agricultural colleges and veterinary institutes. Secondly, Smuts 96 hoped to lift the U.S.A. embargo on importing South African stock and to make favourable arrangements in cattle traffic with Canada and the U.S.A. which Theiler might well facilitate by his attendance at the Veterinary Convention in Montreal prior to the Imperial Economic Conference. He was authorised officially to accept both invitations and to spend an additional three months examining veterinary faculties at various universities as well as scientific institutions in the United States. Thereafter he might go on leave for three months. 97 98 99

100 It was a gratifying assignment to a man frustrated by financial restriction and depressed by the shocking state of the country and the industry which concerned him most. As he made his elaborate preparations, H. Watkins Pitchford arrived from England to promote his stock-fattening foods marketed under the name 'Nutresco' in the hope that the Government would endorse them to improve the hordes of 'scrub cattle' to which Smuts had referred. He was disappointed and after some months, returned to England. The Government was dealing with nutrition and the 'mineral metabolism of stock', including sheep, at Onderstepoort and in any case, utterly destitute farmers could not afford such luxuries, even when produced in the Union. Large numbers deserted their farms, hoping for work in the towns. Derelict properties and animals 101 characterised the countryside. Donkeys in hundreds infested dorp commonages. Graaff Reinet was over-run with emaciated beasts sold at Is. each and the Town Council asked the Provincial Administration for permission to shoot them. Beaufort West's pound held 254 at one point 102 with no purchasers. A Namaqualand speculator offered 4,000 to the Firgrove Fertiliser Factory at 4d. each - to be driven down, shot on the hoof and converted into bonemeal. The offer was refused. Ruin was everywhere and hope glimmered only where export was possible. Wool from 103 improved sheep whose protection from disease Theiler had largely enabled, was slowly proving the point. 104

The Government was by no means opposed to commercial participation in the veterinary field. Patent medicines, vaccines and particularly dips had been recommended from Hutcheon onward. It was part of Theiler's duties to investigate their composition, efficacy and cost. Some flutter had been caused by his producing an arsenical dip cheaper than the companies'. 'Jeyes Fluid', 'Cooper's Dips' and other proprietary specifics had been bywords in South Africa since his arrival and he himself had sought vaccine and medicine manufacturers in Europe and the coöperation of the Cape Explosives Works and its Natal affiliate in the fertiliser and edible 105 phosphorus fields. Now he welcomed the arrival of Dr H. Burg of the Bayer Chemical Works at

Leverkusen in Germany who had come on a two-year visit to test 'the famous drug Bayer 205 on cattle and other animals infected with Nagana'. Du Toit would look after him while he was away.

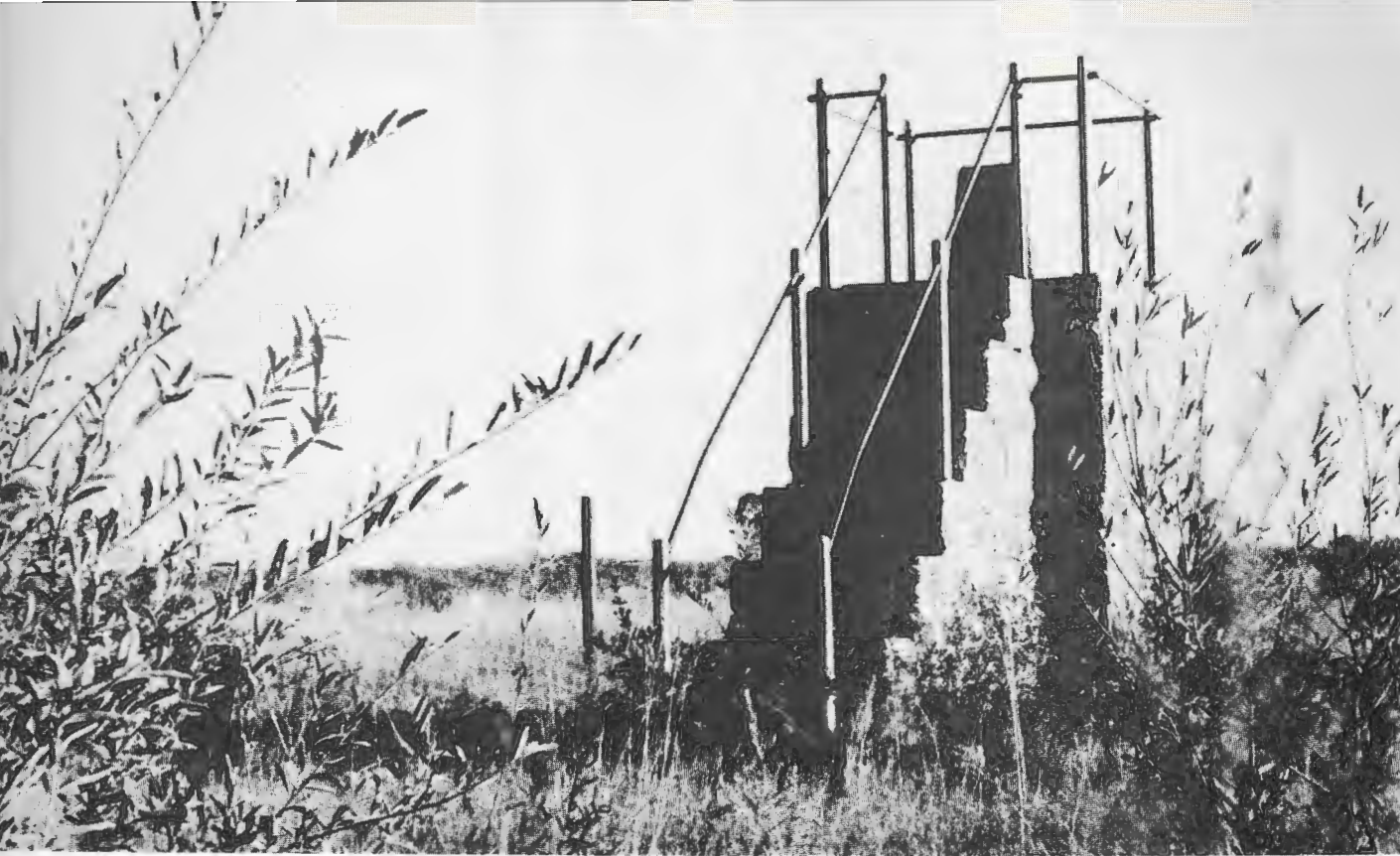
106 Smuts had indirectly underlined in Parliament the paramount importance of Theiler's work in rescuing and developing the country's stock industry. He praised it publicly when he opened the National Herbarium at Vredehuis in Pretoria in July, quoting Theiler as affirming after his survey in Europe that Onderstepoort was the finest institute in the world for investigating animal diseases. (Smuts added ruefully - 'This scientific work is all very costly and expensive but of the greatest value.') But the cattlemen needed more than words. Throughout the country, they were
107 up in arms at the Government's failure to help them and at its policy of importing competitive cattle from Rhodesia and elsewhere. All Smuts' inveighing against the chaotic disorganisation of the meat industry had failed to produce improvement or to develop markets. At widespread meetings, violent views were expressed and strong anti-Government feeling was evident (placat-
108 ed too late in 1923 with a 'Beef Bounties Act' subsidising at ½d. per lb all beef exported and ¼d. per lb on live weight). The ugliness of the time and the temper of its victims were exacerbated by
109 an uncontrollable visit of the eighth plague. As the Theilers and Klärli left Pretoria to embark at Cape Town in July 1923, the lawns of Church Square were thickly covered with layers of locusts.

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World-wide economic trends of the time converged on disaster. Theiler had told du Toit to keep him informed despite the difficulty of a different address almost every day, and he would try to reciprocate. Travelling in the ancient Blue Funnel liner *Aeneas*, the family reached Liverpool early in August and were met by Gertrud (who duly escorted Klärli to Calais on her way home
110 to Thun in Switzerland). Arnold had occupied the voyage with preparing his American addresses and put the finishing touches to 'Lamziekte' in Liverpool. Then the family went to London for the usual hectic round of visits and to see Hans who, thanks to Gertrud's influence, had passed
111 his third year R.C.V.S. examinations. Arnold's presence was demanded at Cambridge where F. B. Smith continued to laud Pretoria's new Veterinary Faculty. Theiler was in his element among distinguished scientists in the congenial Cambridge atmosphere. They offered him a professorship in Veterinary Science for five years. Lesser men would have succumbed to the honour but Theiler, always well informed by his colleagues (Sir Stewart Stockman and many others) was wary, divining that a coterie of interested academics intended using him as a blind to operate against the existing veterinary authorities. Unbelievably to some, he declined the offer and play was later made of his refusing a chair at Cambridge.

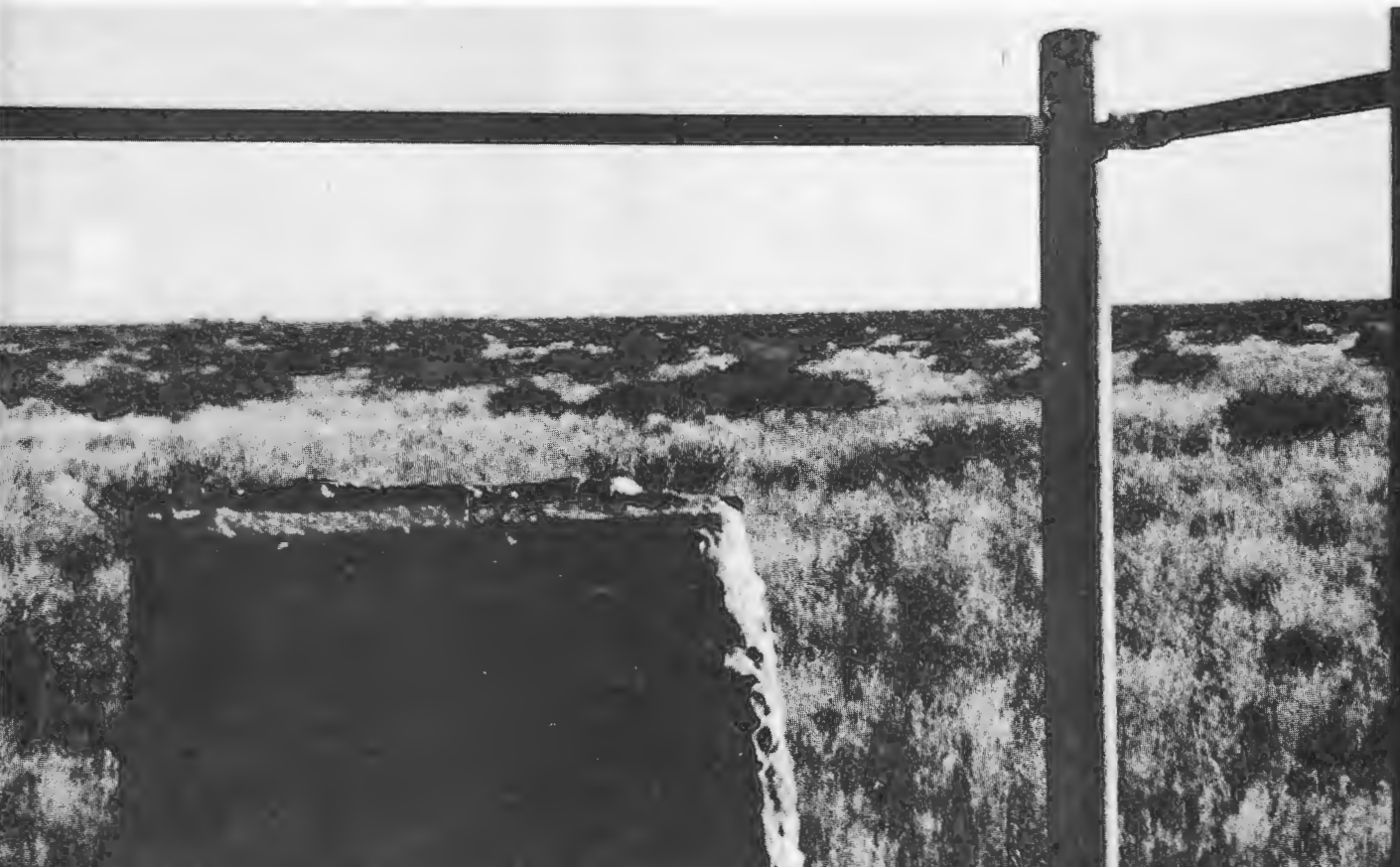
He was wanted everywhere and for all purposes. Leo Weinthal F.R.G.S. and exalted to C.B.E. for his wartime services, demanded letters during his forthcoming American tour for publication in the *African World*. Theiler agreed and forthwith travelled to York to attend the
112 British National Veterinary Conference to which Professor Frederick Hobday had invited him. Many friends including Kehoe and Montgomery were present but it was a painful occasion through the gratuitous discussion of the affairs of the South African Veterinary Association, including its Onderstepoort members. Theiler and Kehoe pointedly withdrew. Kehoe remained for two days at Liverpool with his old chief before he and Emma embarked on the 17th August 1923. As *S. S. Regina* was warped away, Hans, Gertrud and Kehoe waved from the wharf. Arnold was
113 never again to see Kehoe - he died on the 6th May 1928 at the age of 40.

Theiler had always wanted to visit the 'New World' and even as a student, had contemplated emigrating to South America. Now he came, decked with his country's embassy, to the North and an emotional extravaganza which he could hardly have envisaged. It began as the ship



The Stone Platform at Armoedsvlakte which mounted a wind-measuring instrument commemorating the cooperation of the Vryburg Farmers.

The Plinth, empty of its anemometer, at the top of the platform overlooking bleak Bechuanaland cattle country where the Fata Morgana made spectacular appearances.





The experts at work in the veld at Armoedsvlakte – (left to right): Sir Arnold Theiler; Dr Marguerite Henrici, plant physiologist; and Dr Henry Hamilton Green, bio-chemist.

I. B. Pole Evans with Arnold Theiler in the grounds of Vredehuis (Union Building in the left background) where the work of the National Botanic Institute was begun.



114 emerged from fog and extreme cold into the estuary of the St Lawrence River and there, on the wharf at Quebec stood Max, a man transformed since his parents had last seen him two years previously. Max had taken happily to the Harvard Medical School in Boston until struck down by a severe attack of his pain. It was a challenge to his colleagues. There emerged from their analysis that as a small boy, Max had broken family rules and waded in the Aapies River in search of aquatic life, contracting unbeknown the dreaded bilharzia (Schistosomiasis) carried by water snails. It had pursued its course, leaving him with a damaged bladder vulnerable through scar tissue. Under stress, the tissue ruptured causing pain. Harvard repaired it and there was never an attack thereafter. Max stood at the deckrail at his proud parents' side during 'the very grand voyage' up the river taking all day to Montreal where a deputation of five representing the Reception Committee and led by Canada's Chief Animal Pathologist, Dr E. A. Watson came aboard at night to welcome the great man. It was a sentimental meeting. When Watson had been a Canadian trooper stationed at Daspoort during the Boer War, Theiler had persuaded him to enter the veterinary profession. The Theiler family were taken to an hotel as the guests of the Canadian Government.

115 The North American Convention of Veterinarians opened the next day at McGill University and smote Theiler with the full force of his own stature. They gave him 'a most unexpected ovation. I hardly could find words to thank them for this most unexpected welcome.' (At the end, they made him an honorary member and he was likewise honoured by the Canadian Veterinary Association.) While Emma was taken to museums and art galleries, Theiler gave an address in French and the same evening, delivered his lecture illustrated by slides on 'Phosphorus Deficiency as the direct Cause of Disease in South African Cattle' - his staple piece on a long tour. Its novelty and success were remarkable in Montreal where it was considered 'the event of the Convention'. Many members then assaulted Theiler with invitations to their laboratories and institutions in the Dominion and U.S.A., particularly delegates from Texas who recognised in his description of Lamziekte a similarity with their own 'Loin Sickness'. In time an official invitation came from the Texas College of Agriculture. Further honour was done him when he was asked to reply to the toast of The Profession at the formal banquet. A patently sincere if gutteral and ungrammatical speaker, Theiler did it well and 'it had an excellent reception. I think I was able to dig myself a little into the hearts of our Canadian and American colleagues'. Smuts, preparing to leave for the Imperial Conference in London, would have heard by cable of the success of his emissary from his Trade Commissioner in Ottawa where Theiler then went.

116 Honour continued to be done him. The Minister of Agriculture, Mr Motherwell and his wife, called on him and Theiler felt obliged to make a speech about 'South Africa and its great premier'. Dr Watson took him about and he lectured the Government Pathological Division. During the few gaps in his demanding schedule, Emma and he industriously wrote to their family, to du Toit and King. They referred to the appalling earthquake in Japan which had then completely destroyed Yokohama and half of Tokio with a death roll of 90,000, many being victims of the uncontrollable fires that broke out. Japan was on their itinerary. In Ottawa, Theiler had the novel experience of addressing a Rotary Club (there were none in South Africa, he said but the first had in fact been founded in Johannesburg in 1921). Visiting experimental farms and veterinary institutes became commonplace but Toronto offered something new - the Canadian National Exposition where he was the guest of the president and had to make a speech. 'It was well received', he wrote Weinthal, 'and I realised that the applause was meant for South Africa as the youngest Dominion of the British Empire.' He was officially the guest of the Ontario Minister of Agriculture and addressed the Canadian Veterinary Medical Association which presented him with a silver cigarette case suitably inscribed. It was enough to turn any man's head. Notabilities took him here and there - the famous Guelph Agricultural College and Veter-

inary School, Toronto University with its laboratories, various institutions, sights and scenery. 120 Later he was to record that 'in both Montreal and Toronto, I was heartily welcomed and made the acquaintance of the veterinary authorities of Canada who showed me their scientific institutions and made me acquainted with the epizootic and enzootic conditions of Canada'. Emma constantly noted the names of those to whom they were obliged, intending many different forms of acknowledgement – books, curios, dried fruit, etc – when she reached home.

Mercifully an interlude of a day or two at Niagara Falls gave them some rest ('the Victoria Falls are sublime by comparison', they remarked privately) and then Max took them by train to Boston. It was an emotional moment when Theiler was introduced to his son's chief, the bacteriologist Dr Andrew W. Sellards at the Harvard Medical School. He lunched and dined with them and evidently held Max in high regard. His was Theiler's own field and the old man was 121 impressed with the whole School. 'I have seen some really very good work here which I am sure will benefit our researches in South Africa', he wrote, 'I cannot speak highly enough of the hospitality that has been extended to me by Canadians and Americans and I am surprised to see how well the work done by my Division in South Africa is known here. It is most encouraging and refreshing at the same time.' In person and accomplishment, he had become a father-figure in the world at large.

Plentifully endowed with 'neugierigkeit', the Theilers never neglected to see the sights and were widely conducted, filling in with art galleries, museums and cinemas when unaccompanied. They reached New York with Max at the weekend and made for Coney Island and other renowned vulgar recreations. On Sunday, the past came back to them in one of their earliest Pretoria friends, the Swiss Deschler who had served as cook to Theiler's unit encamped on Bulwana Hill above Ladysmith. The day was full of reminiscence and again before they left. (Later in Pittsburgh, they were also to meet Braunschweiler, a foundation member of the Schweizerverein Alpina in Pretoria.) They were a week in New York with Theiler's schedule filling rapidly. The U.S.A. scientists at the Montreal Convention had invited him to give lectures at their various institutes at a fee varying from \$50 to \$150 in the American manner – and Theiler tried to accommodate them with Emma keeping careful count of the money he made. 122 His fame had gone before and on the 18th September 1923, the great Theobald Smith, co-discoverer inter alia of the tick as the carrier of Texas Fever or Redwater (Bovine Piroplasmiasis or Babesiosis) and, according to Theiler, 'the father of tropical and veterinary medicine', came to see him and to take him to dinner 'at a very good French restaurant'. Then 65 and Director of the Princeton Institute for Research in Animal Pathology, Smith was a prince among Theiler's peers and decorated with almost ever honour in his field. It was a great occasion to meet him and they had 'long and agreeable discussions'. Smith invited him to give a lecture at the Rockefeller Institute and the next day, he was the guest of its director, Professor Simon Flexner.

123 Theiler knew that 'by appointing America's most successful investigator in animal pathology, Theobald Smith as one of its charter members, the Board of Directors of the Rockefeller Institute had implicitly accepted the principle that Human pathology cannot well be studied apart from that of the lower creatures'. By the same token, Flexner knew that what Theiler had achieved at Onderstepoort – 'a true research institute' – was of far wider significance than his official terms of reference. He kept him busy for two memorable days, doing him all honour and offering him all facilities including a typiste. They had one particular interest in common.

124 Theiler closely inspected the work being done by gifted scientists in many fields – Dr Louise Pearse on trypanosomes; the famous Japanese medical bacteriologist Dr Hideyo Noguchi (now 48 and about to leave for Brazil to investigate an outbreak of Yellow Fever) who showed him various cultures; Dr Edmund V. Cowdry, cytologist and Professor of Anatomy in Peking before coming to New York in 1921 when he applied himself to investigating minute intra-cellular

parasites of the Rickettsia group which caused Typhus and Rocky Mountain Spotted Fever; Peter K. Olitsky; and others. Theiler, eagerly accompanied by Max, had the time of his life in colloquy with colleagues at the summit of their common pathological profession. Cowdry showed him smears and specimens and his own preparations found in bearer ticks. Theiler promised that du Toit would send him ticks similarly infected with Heartwater. Olitsky demonstrated how he cultivated ultra-visibility such as Typhus. Various cultures were shown on what for Theiler was an esoteric holiday.

125 The inspection continued the next day when Theiler lunched with the Director. Rockefeller's Flexner ran the Institute on unusual lines, following a policy of inviting distinguished overseas and local scientists to work there as well as sending (less numerous) his own men abroad. Theiler now suggested that Heartwater might be caused by a Rickettsial organism and that he would welcome Cowdry at his own Institute if he came to examine the hypothesis. He would in fact welcome a general exchange of scientists. Flexner agreed to release Cowdry and exacted his own toll from Theiler in a lecture a month thence when his schedule permitted. It carried him the next day to the commercial Lederle Veterinary Laboratories on the Pearl River where he closely watched the manufacturing processes of vaccines. Only on the 22nd September, after viewing Manhattan Island by boat, could he sit down and write a long excited letter to du Toit retailing his recent experiences and charging him with sending cultures, infected material and other items promised to the Rockefeller Institute. Du Toit carefully noted them. It would be a triumph for South Africa if a Rockefeller Institute scientist came to work at Onderstepoort.

126 The Pennsylvania Veterinary Association had asked Theiler to deliver a lecture at Wilkes Barre on 'Tropical Diseases' (\$50) or what he called 'some of our South African problems'. Here he heard an address on 'Veterinary Education and the Future of the Profession' whose content he communicated to du Toit with the comment - 'There is no doubt the motor car has hit the profession in America most severely.' Many veterinary colleges had been forced to close.

127 There were only 100-120 graduates yearly to serve a population of 120,000,000 and cattle numbering 80,000,000. The horse had practically disappeared. Then he hurtled on to Philadelphia, a visit to Pennsylvania University, dutiful inspection of the Mulford Laboratories and the State Veterinary College, and finally a dinner given by the city's leading scientists whom he addressed on 'Phosphorus Deficiency'. Sustained by interest, adulation and the momentum of his journey, he was still in good fettle. Max had returned to Boston. It was time to go to Washington.

128 Simultaneously the Imperial Economic Conference opened in London confronted by post-war political and economic problems and with Britain staggering under its colossal war debt. Smuts spoke up for Empire preference to combat the U.S.A. trade drive and urged the subsequent conference of Prime Ministers to act as a single force in settling European affairs. A new concept of the British Commonwealth was emerging. Economic recovery preoccupied everyone; but Smuts devoted himself also to the selection of a suitable Governor-General to succeed the unpopular Connaughts. His choice was immaculate and influenced his country's recovery.

129 Emma thought Washington the most beautiful city she had ever seen. They had a weekend to visit its sights. Then the terrible treadmill recommenced. Theiler formally called on the Bureau of Animal Industries (admired in his formative years by F. B. Smith) and was introduced by its director Dr Moeller to the U.S.A. Secretary of Agriculture, Mr Wallace 'who offered me a hearty welcome and showed some interest in South African affairs'. He was told that the U.S.A. had lifted its embargo on the importation of South African stock and congratulations were offered on his success in combatting animal diseases. That evening, at the instigation of Professor H. B. Ransom, president of the Helminthological Society, Theiler addressed the staff of the Bureau.

130 The field of his famous host had long been of special interest to him (and latterly Gertrud) and

131 discussion was lively. Ransom intended visiting South Africa and hoped to spend some time at

Onderstepoort (he died in 1925 before he could do so). Theiler was made a corresponding member of the Helminthological Society.

132 The delegates of 43 countries registered the following day for the World Dairy Congress, the U.S.A. itself being represented by the State Secretary Mr Hughes, the Secretary for Commerce Herbert Hoover (later President) and the Secretary for Agriculture Wallace who opened the proceedings. The next day they all trooped to the White House to meet the President, Calvin Coolidge and visit the Capitol. Designed to give the international convocation the maximum view of the United States and its dairy industry, the Congress was peripatetic and adjourned after one session for the night journey to Philadelphia where it was re-convoked as the guests of the city for 'a day of real American hospitality'. Then it moved on to Syracuse and partially got down to business in the tumult of Parades on the Showground and other unusual distractions. On a Saturday morning, the Congress president suddenly asked Theiler to speak and 'for want of something better', he addressed it on 'Phosphorus Deficiency' which was always a novel and popular subject. The whole hullabaloo and the intoxication of being part of such a concert of eminence impelled Theiler to write the next night to du Toit - 'I have made up my mind definitely to stay in the Division and not to leave until the time is up I promised to stay'. He had spent the day on a motor tour of an Indian reservation.

133 Not until the 8th October did the Congress resume in full session only again to be distracted. Theiler had been elected honorary president of C Section dealing with Diseases of Dairy Cattle on which he delivered a paper on the 10th October on Tropical Diseases. Then the delegates were swept off to lunch by the University of Syracuse which staged a Graduation Ceremony on the Showground, awarding honorary degrees of D.Sc. to 8 distinguished scientists of France, England, Scotland, Denmark, Sweden, Canada, Switzerland and Theiler of South Africa. 'The man from South Africa' was much interviewed and photographed by the local Press. Despite 134 the overwhelming hospitality and constant distractions, Theiler considered the Congress 'a great success and marks undoubtedly a great day in the history of Dairy Science'. He had again been inundated with invitations.

Always escorted by local scientists or practitioners, he was taken to dairy farms and model estates before reaching Ithaca, seat of Cornell University which was inaugurating a new Dairy Building in the New York State Veterinary College which much impressed him. He had also to see the State's Agricultural Experimental Station at Geneva, lunch at the College, be taken for drives, watch football matches and be 'entertained'. 'I am tired and almost ill from all the rush', he wrote du Toit in a rare pause on a Sunday. He had been commissioned (\$100) by Cornell (whose students' work on calcium deficiency in hogs he had found impressive) to give an afternoon lecture on tropical problems. It was 'well attended and well received' and then it was the train again for Boston - 'Another hectic week in store for me. I am looking forward to a sea trip to have some real rest. I want to be a Nobody for some time. It is a hard job to be lionised all the time!'

135 It was fine to see Max again but an additional strain. He would have to make a good showing before Max's boss, Dr Strong whose guests the Theilers were and the occasion was auspicious, indeed itself an honour - the Cutter Lecture previously given by the most distinguished European and American scientists. It was held in the late afternoon and Theiler acquitted himself well - too well. The Harvard School of Tropical Medicine intended making the most of him. After dinner, he had to address an eminent circle of scientists and ladies chaired by Strong and the following morning, an equally demanding audience of professors and students. The Cutter lecture on 'Toxic Plants and Diseases caused by Them' had gratified him (and Max) with 'great applause'; but his appearance before his academic audience, speaking on 'Ultraviolet Viruses and Immunisation' with special reference to Horse Sickness and Blue Tongue in Sheep, had a

different reaction. 'It tickled the people very much' – so much that he had immediately to give another lecture on the same morning before catching the lunchtime train to New York. Theiler was always at his best when lecturing students – relaxed, simple, direct, homely, almost confidential in his approach – but he could simultaneously captivate academics. Du Toit was instructed to send Onderstepoort publications to Dr R. B. Strong, Dr Milton Rosenau, Dr A. W. Sellards and many others.

136 Max, pleased with Pa's success, remained with him and Emma (carefully noting that all four Harvard lectures amounted to \$150) on the journey to New York for the promised address to the Rockefeller Institute. Arnold was frankly frightened. He had 'to face the scientists who are foremost in experimental medicine and I was afraid of their critical mind'. He had chosen the effect of toxic plants on animals as being outside their field and probably of novel interest. The gathering itself was frightening – Theobald Smith had come specially from Princeton to join 'all the great men of the Institute' and the whole staff. But Theiler's story was worthy of a practical research scientist employing exhaustive methods to establish valuable conclusions. He spoke it like a man and was rewarded with triumph. 'It raised', he said, 'a great enthusiasm for our work.'

Flexner congratulated him warmly on his achievements in an unusual field. 'He saw and pointed out', Theiler recalled, 'the importance of the toxic action for general pathology and suggested to the physiological pathologists of the Institute to come to South Africa and make use of the opportunities existing there.' At last someone shared his vision. Theobald Smith took it upon himself to lecture the audience on the work done at Onderstepoort – 'the home of research in tropical diseases of animals' – and on its importance. Congratulations came dizzily from the great men he had feared. Max could be proud indeed.

137 Theiler spent two intoxicating days at the Rockefeller Institute. He was at the very apex of advanced work in his field. He talked to Dr Pearse about her work on trypanosomes. Alexis Carrel showed him his tissue cultures. Others made him party to their esoteric techniques. Flexner and Cowdry finalised arrangements for the visit to South Africa. Cowdry would leave in June to work at Onderstepoort on the possible association of Rickettsia parasites with some cattle diseases and to make other cytological investigations. Theiler exulted over the arrangement. 'I cannot tell you', he wrote Weinthal, 'how pleased I am to know that the Rockefeller people consider our place a suitable institution for the undertaking of such work.' To du Toit he wrote with equal enthusiasm, urging him to collect dog-ticks and others from Heartwater victims and to breed as many as possible in readiness for Cowdry's study of Piroplasmiasis in the Dog and Heartwater in Cattle. If he revealed Theiler's hypothesis as valid, it would be the first observation of Rickettsia in any animal other than Man.

138 For the following four weeks, Arnold and Emma pursued a schedule that taxed their tough Swiss constitutions to the utmost. They were always in trains, mostly overnight, and rarely able to recoup with rest in hotels. Deficiency diseases were de rigueur and every research institute and college wanted to know what Theiler was doing in South Africa. From New York, they went to Rutgers's Agricultural College whose principal had farsightedly booked him in a letter to Pretoria. Then back to New York where James Walker who had been visiting commercial laboratories to survey supplies for East Africa, awaited them at the hotel. He asked permission to spend two weeks at Onderstepoort on his way back to Nairobi. (When Walker reached Pretoria in 139 January 1924, he reported Theiler as looking 'fit and well' but the murderous momentum was beginning to tell.) Arnold and Emma had themselves written 16 letters the night before to firms purveying laboratory apparatus.

He paid a last visit to the Rockefeller Institute where a pathologist from Columbia University demanded a lecture. Theiler tried to accommodate it but was pledged immediately to go to Yale

in Newhaven and Johns Hopkins Medical School in Baltimore. Mendel at Yale felt he had been put out of countenance in his work on vitamins by Theiler's on phosphorus. At Johns Hopkins, he had been invited to give a prestigious memorial lecture, choosing 'The Etiology and Control of Animal Diseases in Warm Countries' as his title and suffering an introduction mentioning 'his refusal of a chair at the most distinguished university in the world - Cambridge'. It was an ordeal with almost all the Medical School professors present but also, joyously, a number of South African students who were held in high esteem. He had met them in other places, finding them 'highly spoken of and much respected. There is no doubt', he wrote, 'that the intellect of the South African student in America is considered to be a very bright one.' Max was to carry their flag highest of all.

140 The rigours of his particular 'lecture circuit' did not absolve Theiler from his official duties. He returned to Washington to make a formal call on the Bureau of Animal Husbandry and on the U.S.A. Board of Public Health where he observed experiments on dogs for Pellagra (malnutrition) which he had himself made some years before at O.P. (Theiler could put many overseas scientists out of countenance but professed humility as someone come to learn.) He was due at Pittsburgh the following day and found a large crowd outside his Washington hotel from which the flamboyant Lloyd George emerged and was driven away in a motor car. 'The old wizzard seems very popular over here', Theiler remarked, ignorant of the chaos he would create. 'The old wizzard' returned immediately to England and so confused the electorate with support of Free Trade and Empire preference that Baldwin's Government lost their overall majority at the December election and their Liberal opponents were equally unable to govern. A Labour Government under Ramsay Macdonald took office in January 1924 and all the work that Milner had initiated and Leopold Amery zealously continued at the Colonial Office was temporarily frustrated. The new concept of the British Commonwealth in which Onderstepoort would play a part endured only a few months hindrance.

141 Theiler's tendency to over-organise himself could have killed him had it not been for the importance and interest of his mission and the gratifying feeling of being wanted (and fêted) everywhere. Unceasingly he travelled, inspected, lectured and discussed common affairs with scientists across the United States - Columbus, Chicago, Lexington, Bloomington, Aimes, Kansas City, Dallas, Houston, Galveston. Interludes were rare. While in Chicago (inspection of stockyards, Armour Packing Company, University professors etc), a Swiss whom he had met in Montreal took him to Joliet to meet the American branch of the Theiler family who had emigrated in the 1850s. Einig as ever, Theiler as 'founder of the South African branch!' planned a grand reunion in Switzerland. At Aimes in Ohio, the South African students of the Veterinary Medical School entertained him to lunch and 'we talked Afrikaans to our heart's delight all the time!' By then he was 'almost tired out' but the worst was still ahead. His last official duty took him south to cattle country.

In Emma's view, Texas ranches looked like Bechuanaland. She noted too 'the oil farms' and 'oil-burning engines'. They were ceremoniously met at Dallas by a Scotsman, Mr Boag Scott with the resounding title of Chairman of the Texan Board of Livestock Sanitary Commissioners who drove them to College Station where the Veterinary College was run on military lines. The Governor of Texas having failed to appear, Theiler conferred with the professors and the following night, gave his first lecture on Lamziekte with slides. It astonished his audience who produced identical pictures of their 'Loin Sickness' or 'Down in the Lovers'. Much colloquy ensued from which it emerged that Texas ranches were so huge that it was impossible to clear them of carrion or corral cattle to feed them bonemeal. There was however an agitation for purification as Anthrax was also prevalent. Theiler gave two more lectures the following day (totalling \$250) which aroused equal interest and set off for Houston, arriving 'very tired'. A concourse of

cattlemen assembled to hear him on Lamziekte and 'they also recognised the disease and the condition to be identical and much appreciation was expressed that the Loin Disease had found an explanation'. Being in the Redwater or Texas Fever area, Theiler compared methods of dipping with his own recommended practices.

A final ordeal remained – the 57-mile drive to Galveston where at last Theiler met the Governor of Texas, Pat M. Neff, in town for a Baptist meeting (and 'he really did resemble one of our Takhaars in the Transvaal'). Then the train again but this time on leave and en route to the Grand Canyon, a journey of two days and two nights. Exhausted and longing for the sea, Theiler could feel that his mission was successfully accomplished. He had learnt much and the New World had been made aware of Onderstepoort and the level of its work. One day he must carry its flag to South America. Interesting work had long been done there.

'My visit to America was not a pleasure trip and certainly not a holiday', he wrote, 'I have given as much as I could give but I have also received as much as I could take in.' Now he intended relaxing but it was not to be. From Galveston to the Grand Canyon, the country reminded him of South Africa with the same scrub cattle in poor condition, probably suffering from phosphate deficiency; but their fate was different. They were sold in that condition to the corn States and there fattened for trade. California too looked like South Africa and Theiler hoped for agricultural hints. Arriving at Los Angeles, he was too tired to accept invitations but suffered two clamant reporters who wanted to know about his country 'which I cracked up all that I was able to do and told them certainly California was a good second!' At San Francisco, Berkeley University wanted lectures but providentially the Theilers found that their ship was indefinitely delayed and accordingly accepted immediate passage on *President Cleveland* whose badly-designed cabins, poor food and inscrutable Chinese stewards displeased Emma. The voyage was very rough and they were hardly able to stand, let alone write. Glad to get aboard, they soon longed to get off and put their feet on solid ground. Further, Emma told the children, 'Father was mad enough to have his beard cut off and looks horrible!' He was at first so tired that he could barely read or write and his mind went blank so that he could remember neither names nor facts. In time, their exhaustion disappeared.

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In his over-organising way, Theiler had planned their 'holiday' to cover the maximum number of scientific institutions in the Far East. From Honolulu they were buffeted for three days to reach the quake-wrecked Yokohama – 'eine schreckliche anblick' (a terrible scene), Emma wrote – before travelling to Tokio where they lunched at Frank Lloyd Wright's Imperial Hotel standing unharmed among the ruin. Thence by various ships to Shanghai and Hong Kong, purely as tourists and then to Manila where Theiler was duly met by the Principal Veterinary Officer from whom he learnt nothing.

14 2 Disenchantment with the Orient possessed them both and they returned glumly to Hong Kong where at last there were letters and a printed copy of Gertrud's thesis. 'You have done the Veterinary Science of South Africa a great service', Arnold brought himself to tell her, 'Your work will now stand in the Scientific Annals of South Africa alongside that of your father. I am really proud of you!' And then he climbed off his high horse and begged her to upbraid Hans (who had not written) for 'lacking the will power and energy which should be characteristic of his age and education' so that he might qualify to earn his living. Gertrud had transferred from her study of Nematoda (which was of great value to the horse-breeding industry) at Liverpool to the London School of Tropical Medicine to work on Trematoda under Professor R. T. Leiper. She had hoped to be better able to help Hans but her efforts seemed unavailing.

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144 There were letters too from du Toit, as yet unaware that the University of Berne had conferred an honorary D.Sc. on his chief. The news took long to reach Theiler whose elevation was celebrated in the Pretoria Press (which had published some of his 'breezy reminiscences' leaked from private letters) with the statements that he was now 'a D.Sc. of three continents - Africa, Europe and America. So far as is known, no other scientist holds this unique position'. Nor did he then know that Smuts had returned in exuberant spirits from the Imperial Conference exclaiming 'I've got you a jewel of a Governor-General!' and dismounted from his train at Irene to a military reception, the whole Cabinet, the High Command and the diminutive figure of Mrs Smuts.

Already tired of travelling, the Theilers took a river ship to Canton where they had an assignation on Christmas Day with an old acquaintance C. W. Howard, the entomologist of the Department of Agriculture in 1907 and now attached to the American Mission College in Canton. He showed them all the sights (the harbour was full of the warships of every nation against impending trouble) and gratefully, they embarked for Batavia, the only white passengers on a 40-year old liner. Entertained by local Swiss and assiduously touring, Arnold and Emma began their visits to Colonial laboratories and Veterinary Schools, continuing at Singapore, Kuala Lumpur and Penang where Veterinary-Surgeon Simpson of Daspoort days and later, Nairobi, met them.

The Orient had become slightly more attractive but not the veterinary facilities, except when they reached Burma and Theiler found himself among Pasteur Institute and Veterinary School colleagues at Rangoon. India was far more rewarding touristwise and professionally. Calcutta had a Veterinary College and Pusan an agricultural station. Theiler was aiming for Muktesar and passing through Benares and Lucknow, took train to Barilly where its director, T. E. Edwards met them and escorted them into the Himalayas in teeming rain. Arnold and Edwards rode ponies but Emma, thoroughly wet, was carried aloft in a 'dandy' or chair by four coolies. Reaching Edwards' house at 7,500 feet, they could hardly see the Himalayas for rain but all unpleasantness was compensated by their genial host.

Muktesar, Montgomery's original station, greatly interested Theiler ('that God-forsaken place', he called it). Edwards produced Rinderpest serum there and dealt with India's multitudinous tropical diseases. He came down with the Theilers to Lahore to introduce them to the Veterinary College where Britain, like South Africa, was training indigenous veterinarians. Theiler found it well-built and well-equipped - 'better than any other I have seen in my whole life including America'. He was appalled at the possibility that 'all India and all Asia represents a huge new reservoir of all possible diseases'. His earlier acolytes at Armoedsvlakte and Onderstepoort, Cooper and Bennett, were working on identifying them.

Sightseeing now preoccupied the Theilers except at Delhi where they officially met the Imperial Secretary for Education and Lands. Thence to Agra where the Taj Mahal in moonlight and by day produced 'the most overpowering impression' of their tour. They spent nearly a week in Bombay with Emma happily shopping and Arnold visiting the Veterinary College. Letters reached them from home, one bringing the joyous news that Margaret had got a job as teacher of physical culture at the Jeppe School for Girls in Johannesburg - for Arnold, one more step toward freedom. Only Hans and Gertrud needed to find their feet and release him for retirement.

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146 For six months, the Theilers had been travelling almost every day, always under strain and often in severe discomfort. The Orient had been disappointing. It was good to be going home. Theiler wrote James Walker in Nairobi that he would like to meet him as his ship passed through Mombasa. On the 20th February 1924, they embarked at Bombay. Arnold had caught a cold and developed bronchitis. His embassy was not yet over.

As *S. S. Karao* approached the African coast, Walker took quick action. Theiler's letter had stated that he would be in Mombasa on the 29th February. Walker took it to his superiors who referred it to the Governor. Sir Robert Coryndon immediately sent radiograms to the ship inviting Theiler to spend two weeks in Nairobi to confer with its veterinarians and to the Union Department of Agriculture asking authority for him to do so. Theiler received the invitation and his Department's permission at the same time at sea on the 26th February but his ship sailed past Mombasa and cast anchor at Zanzibar. There was a case of smallpox on board and the mainland was not risking infection. The delay was short and the Theilers landed at Mombasa on the 1st March with Arnold still bronchitic and coughing and 'very anxious to get home but I did not dare refuse the invitation'. He regretted missing his share of lecturing the veterinary students at the opening of the academic year.

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148 The Kenya Government's invitation 'to confer with the veterinary authorities in regard to the stock diseases of the Colony' was misleading. From the moment Alexander Holm, previously Union Under-Secretary for Agriculture (South Africa's trained men were to be found all over the world) met him at Nairobi station with accompanying officials, the Theilers were rushed about the Colony wholesale - Nairobi and the Kabete Agricultural Station, Lord Delamere's model farm, Nakuru, Lake Elmenteita, Eldoret, Kitale, Kapsabet, Kisumu and by train back to Nairobi where they dined with the Governor whom Theiler had first met at Daspoort in 1908 when he was Resident Commissioner for Swaziland. Then more excursions to Thika to see the sisal plantations and other developments, and finally a lecture at Kabete. The local veterinarians profitted from his presence (he advised Walker on the type of experiments he should conduct to achieve immunity to East Coast Fever) and Theiler, who had not visited East Africa since 1909 when he had gone to Uganda at Bruce's behest, professed 'surprise at the advancement in Kenya which was really amazing'.

149 Unable to curtail the voyage by disembarking at Lourenço Marques where his rail warrant had no validity, Theiler reached Durban on the 26th March and made straight for Onderstepoort. Only one continent had been omitted from his seven-month itinerary.