## CHAPTER FIVE

## SISYPHUS IN THE GOLDEN CITY 1893-1895

BY COMPARISON with the raucous restless Johannesburg, 'the garden city of Pretoria' was considered 'a dull hole'. Visitors from the Rand affected to be so depressed by the deathly silence at night, the deserted streets, lack of cabs (only jinrickshas were available) and absence of audiences for entertainment that 'they never stay longer than they can possibly help'. When the railway connected the two towns in September 1892, there was no necessity for the enfevered inhabitants of the Golden City to remain unduly in the Capital whose unhurried tempo and questionable Government pursuits were so alien to their own activities. The Randlords 'sped' back and forth (with a coffee halt at Kaalfontein near Irene) and Nellmapius, J. B. Taylor, Leo Weinthal and other schemers, politicians and negotiators joined them from Pretoria.

Incredibly, within seven years, the feral veld had incubated a sprawling fungus of shanties, soft-brick houses and a few tall buildings largely constructed of wood and corrugated iron. There were lighted streets, five miles of horse-tramways (which in 1893 carried 1,138,669 passengers and made a profit of £13,740), lively theatres, a myriad of bars and beerhalls, large stores purveying every variety of imported goods (with pleasant revenue in customs dues to the Republican Government) and a wildly miscellaneous population in which Germans figured

prominently.

Johannesburg had become a large and bustling town of 40,000 inhabitants of all races, whose atmosphere was distinctly raffish. The world at large contributed to its population a continuous flow of speculators, confidence tricksters, fugitives from justice, problem sons of affluent and aristocratic families, thwarted professional men seeking new opportunities to utilise their training, pedlars, prostitutes, merchants, artisans and pure chancers hoping to profit from what they might find. Over the potentially lawless scene endemic with hooliganism presided a Special Landdrost, the hoary and urbane Carl von Brandis, a longstanding German immigrant beloved and respected by all. He was assisted by a Civil Landdrost (magistrate) J. F. de Beer and a criminal magistrate N. van den Berg. They were very busy, despite the alleged lassitude of the 'Zarps' (Zuid-Afrikaansche Republiek Politie) who, largely mounted and under the authority of Commandant D. E. Schutte, were considered rather a joke as policemen.

If the future of Johannesburg lay in the hand of any single person, it was not Stephanus Paulus Johannes Kruger but a little London Jew, Lionel Phillips employed by the powerful financiers Julius Wernher and Alfred Beit with Rothschild support. Phillips, barely five feet in height, was a singular personality who, almost entirely self-educated, had served a bitter apprenticeship on the Diamond Fields and through sheer merit and industry, had gained the favour of the ruling Kimberley clique led by Rhodes. When the time came for the diamond barons to consider the upstart Wit Waters Randt gold-mining industry, they appointed three of their best men to administer the properties which they had hurriedly bought – Hermann Eckstein, J. B. Taylor and Lionel Phillips. By 1893, Eckstein was dead, Taylor (who lived in Pretoria in friendship with Kruger and Nellmapius) was retiring and Lionel Phillips, fanatically industrious and visionary, was not only the head of the leading firm popularly known as 'the Corner House' (through the situation of its office) but also president of the Transvaal Chamber of Mines. He was everywhere acknowledged as the leader of the mining industry and the 'King of Johannesburg'.

The faith that had inspired his employers needed courage to sustain. Tough, imaginative, capable of transmitting his confidence and enthusiasm, Phillips was confronted by a collapsed ideal. The gold which overtly lay around in outcrops for the first seekers, existed payably only

at great depth. Huge capitalisation was necessary to sink deep shafts, erect stamp-batteries and process the ore by primitive method. Few shared his confidence and that of his employers in developing the industry and during 1892/93, it sank into deep depression through lack of working capital. The slump of 1893 could have been fatal. 'Speculative business was dead, shares in the various companies were only saleable far below their value, some mines were idle for want of funds and we were confronted', said Phillips as chairman of the Chamber, 'with the disheartening spectacle of much prosperity to a few companies, none to others and a relative absence of profit to those indirectly dependent upon the industry.'

The problems that beset him were manifold. Wastage was high. The installation of the Mac-Arthur-Forrest process of extracting gold which would largely eliminate it, had only recently been commenced. The native labour essential to mining was irregularly supplied and reluctantly rendered (the wretched emigrants from the native reserves at once took solace from hard liquor. illicitly sold, and provided unreliable service). The white miners and their families, living in isolation on lonely mines strung for 60 miles along the Reef, were bored and dissatisfied. The townsmen, exacerbated by the multitudinous restrictions and ineptitudes of the Republic Government became increasingly disaffected, combining their malaise (prompted by politicians) into a demand for the vote. Seasonal epidemics, particularly of typhoid, enteric, diphtheria and pneumonia, afflicted a population whose water supply was suspect, its sanitation primitive and its civic conditions generally deplorable. A Gezondheits Comité or Health Committee of publicspirited citizens had been formed under Government aggis and Phillips took his other problems to the State Mining Commissioner, the engaging J. L. van der Merwe (married to a Scotswoman) who in 1892 had increased his staff by a Mines Health Officer. In the paradoxic manner of the times, he was Sir Drummond Dunbar, seventh baronet of ancient lineage but without lands. No one looked askance at a Scottish aristocrat employed as a Republican servant. He was persona grata with all.

The health of the community, particularly of the black and white labour force of the mines, was universally of primary concern at a time when the golden goose was having protracted difficulty in delivering its egg. The Smallpox 'scare', as it was hopefully called, continued to hover around the whole of Africa South. By the end of 1892, it had reached the Northern Transvaal, carried, it was believed, by wandering natives. In January 1893, the prestige liner *Scot* was quarantined in Port Elizabeth with four cases including her doctor and some days later, another ship *Tartar* brought cases to Durban. Then Smallpox appeared in Johannesburg itself. On the 26th January, an English emigrant F. Hunter who had travelled on *Tartar*, was diagnosed a sufferer and rushed into isolation. Doom could well face the struggling Golden City.

So frightful a prospect galvanised both the Government and the community. The Assistant Landdrost N. van den Berg kept in constant telegraphic communication (there was no telephone line) with his superiors in Pretoria. The District Surgeon Dr Cecil Schulz and a colleague had diagnosed Smallpox but upon the patient improving, van den Berg called for further advice. There were 35 doctors of all nationalities in Johannesburg and in their manner, they divided. The Germans said the disease was only Chicken pox but the English backed Schulz (a South African of German origin) and confirmed Smallpox. Van den Berg was then empowered to spend money and ensure isolation. The wretched patient was confined to a tent guarded by Kaffirs behind the New Gaol on Hospital Hill (later The Fort), no other accommodation being available. Schulz and van den Berg demanded a 'lazaretto'. Seriously alarmed, the Government immediately sent its Public Works official, S. Wierda, to select a site for such a building and authorised the appointment of a special Smallpox Committee.

The patient, expected to expire in his tent in frigid weather, surprisingly improved and on the 30th January, the local Health Committee under its altruistic chairman, Edward Hancock, met

in emergency session. They decided to insist on a substantial building to quarantine suspected cases. Sir Drummond Dunbar, alert to the dreadful consequences among native mine labour, immediately issued a circular to all mine managements and other employers, urging hygienic measures and the isolation of all suspects. A considerable body of opinion disparaged the whole 'scare' as due to 'Kafferpokken' long known among natives, Pemphagus diagnosed by Dr L. S. Jameson during a similar outbreak six years previously in Kimberley, and plain Chickenpox.

12 Before long, yellow flags were flying outside houses in many streets in Johannesburg.

The special Smallpox Committee appointed by the Government under the chairmanship of the Mining Commissioner J. L. van der Merwe, consisted of the Government Health Commissioner, W. Eduard Bok; the Assistant Landdrost N. van den Berg; the chairman of the Health

Tommittee, Edward Hancock; the town's Health Officer, A. Bleksley; the District Surgeon, Dr C. Schulz; the chairman of the Chamber of Mines, Lionel Phillips and (a later appointment)

- the Mines Health Officer, Dunbar. Their strategy was voluntary vaccination and strict quarantining of suspected cases of which large numbers began to appear on the mines, the isolation of victims being supposedly guaranteed by white and native guards. No native was allowed to leave without being vaccinated, lymph being imported from Europe. Dramatic emphasis of the serious-
- 5 ness of the situation immediately occurred when Coleman, the valet of the visiting Lord Algernon Gordon-Lennox, contracted Smallpox on the 17th February when in attendance at Height's Hotel, the most fashionable hostelry and rendezvous in town. His employer and Lady Gordon-Lennox were forced into quarantine and Coleman duly recovered.

The event intensified the 'scare' which the newspapers had been trying to deflate. Even if it were a mild variety of Smallpox, it was gaining ground, especially among natives on the mines. On the 1st March, the chairman of the Chamber found it necessary himself to go to Pretoria with his colleagues van der Merwe, van den Berg and Hancock of the Smallpox Committee to discuss the situation with the Government. Phillips, having lived through the Kimberley outbreak,

knew more than most.

There was still no sign of a lazaretto. Schulz was working himself to a standstill, his private practice abandoned and his responsibilities so wide that he had inspanned his doctor-brother Aurel. Dunbar was losing his fight on the mines. Bleksley was continuously finding white and Kaffir cases in the town. The collection of tents on Hospital Hill intended to isolate them became farcical. It was feared that the inmates would die from the early bitter cold. Suspected cases

huddled with patients and unnecessarily contracted the disease. Harsh recrimination at failing to provide a lazaretto began to be directed at the Government, now accused of 'criminal neglect'.

19 The best it could do was to vote £450 to pay for ineffectual quarantine guards. The people in

Pretoria trembled at the prospect of the epidemic's reaching them.

Early in April, Lionel Phillips left for a nine month visit abroad, his place on the Smallpox Committee being taken by the acting chairman of the Chamber, Carl Hanau, a firebrand speculator given to explosive opinions. It was now autumn, always a time of prosperity for Smallpox. Those concerned with its operation knew that the quarantining strategy was an utter failure.

- The 'guards' engaged to ensure isolation were either terrified of infection, incapacitated by drink (despite the efforts of specially-appointed 'sergeants' to dragoon them and prevent decamping) or mutinous through failure to pay their wages. The notorious inefficiency of the Administration nullified the efforts of the Smallpox Committee. Although amounts of £5,000 for
- 2 (guards and £550 for a temporary isolation hospital were allocated, van der Merwe himself could not get the cheques from the Government. Fatalities were low but the number of cases steeply
- 22 increased. Despite the va-et-vient, particularly of natives, Pretoria miraculously remained untouched. The inhabitants, in a horrible winter of floods and washaways, hugged themselves with relief.

The situation now seriously menaced the mining industry whose leaders freely discussed in their Chamber their belief that the disease was not Smallpox at all and that they were being unnecessarily hampered. Quarantining had been ordained by the Government, yet the responsible committee was unable to obtain the funds necessary to implement it. When Dr Leyds refused to advance an urgently-needed £2,500 without detailed specifications and declared that the money should be obtained from the mines, the fiery Hanau expressed himself in committee with characteristic vehemence. His colleagues, all non-mining men, were entirely with him and on the afternoon of the same day (19th May 1893), the Smallpox Committee's deputation of van der Merwe Hanau and Hancock left by train for Pretoria to confront Leyds. Their case was irrefutable. The policy of quarantining was abandoned, the Government would immediately proclaim Compulsory Vaccination beginning with natives (by resolution Article 281 of the Executive Council of the 23rd May), and the Committee was given £5,000 to get on with the work. The regulations were gazetted on the 29th May.

On paper, the situation seemed to have been met. Large quantities of vaccine had been imported from Germany and England but many doctors regarded it with suspicion, preferring the primitive arm-to-arm technique. It was subsequently alleged that the imported vaccine became impotent on the journey and was useless. The ever-progressive Cape Government had foreseen the emergency and Edington had begun producing vast quantities of vaccine from calves in his laboratory in Graham's Town. To combat its viscosity (if too thick, it tended not to penetrate scarification of the skin) and to enhance its capacity to travel in great heat and other conditions, he added a proportion of two/thirds glycerine, later diminished to one half. He purveyed his product in two forms – in small tubes containing a large number of fluid doses, and on ivory points or 'needles' on which the vaccine had been dried. Such points could be rubbed on the scarified skin. Before the Transvaal Proclamation was gazetted, Bleksley had reported to the Johannesburg Health Committee that there was a shortage of vaccine although the mines held large imported supplies, and was authorised to telegraph an order to the Cape Government

The Smallpox Committee continued to meet every day in Johannesburg, now without Carl Hanau who, debilitated by his multifarious duties, went on a six-week holiday to 'recruit'. It still paid 350 white guards £3 a week and 300 natives £1 (both given to intoxication upon receipt of wages) but with compulsory vaccination, they were soon dismissed. The shortage of vaccine, always of variable quality from whatever source, continued. The epidemic, so far from dwindling, now began to increase and to include some distinguished victims (although in its whole course, only 19 died). The Health Committee left the problem to its sub-committee of which its chairman was a member, pronouncing only that no European was to be vaccinated arm-to-arm from a native and that adequate calf-lymph supplies were available and being used by its two official vaccinators. Drs Cuffe and John van Niekerk.

These gentlemen held strong views (some of the lymph, they said, 'was little better than pure glycerine') but not as strong as those of the District Surgeon, Dr Cecil Schulz. He stated roundly that the lymph supplied by the Government was only 10% successful and some specially imported from Natal had attained only 15%. All the vaccinators had complained. He demanded a satisfactory supply and insisted that the Smallpox Committee establish a 'lymph farm' with calves to produce effective vaccine. It was a stunning proposal and the chairman J. L. van der Merwe, temporised. He asked Dunbar to investigate what it involved and the secretary E. Stahl to collect information for the next day's meeting. That night, the nascent Medical Society resolved to recommend that vaccination be made compulsory for whites as well as blacks. The need for reliable lymph would increase, especially as Smallpox notoriously intensified in winter. Sir Drummond consulted Cammack who pronounced that heifer calves were the most suitable.

He then journeyed to outlying suburbs to enquire their price and found them available at 35s. to 50s. each. Their upkeep would amount to £1 per day. There would be no difficulty in establishing a 'farm'.

The Committee met specially on the night of Wednesday the 19th July 1893 – an historic occasion to which they had invited four doctors (Cuffe, Bourke, Lilienfeld and van Gorkum) to give their views. The discussion was violent and disputatious. Dr Cuffe with massive experience was totally disenchanted with calf lymph – it was either inactive or so virulent as to give the disease. Best was 'humanised' lymph or arm-to-arm vaccination. His colleague Bourke concurred. His Continental colleagues, van Gorkum and Lillienfeld, disagreed. From one calf in Germany, Dr van Gorkum said, 8,000 people had been vaccinated. There was always the danger of syphilis, tuberculosis and other diseases being conveyed by person-to-person vaccination. Hancock was 'dead off' lymph and van der Merwe too was strongly in favour of arm-to-arm though Hancock admitted that Johannesburg people had a prejudice against it. Schulz and van den Berg fought strenuously for the 'farm' and Hancock was converted. The medical men, having cast no light on the scene, withdrew. The Star commented bitterly on their professional divergence.

The Committee, relieved to be alone, made small jokes before again attacking the serious business. It was agreed to ask the Government to make vaccination compulsory for whites. Then the chairman put the question: 'Shall we go in for that little farm?' (laughter). The fierce advocacy of Schulz and van den Berg and the capitulation of Hancock prevailed. Schulz had said that the total cost of trying the experiment of procuring lymph from calves over a period of about 14 days would be only about £25. There was a gentleman in Pretoria in charge of an institution already marketing such lymph, some of which he rather thought had already been supplied to them. 'Let us wire him tomorrow', the chairman said, 'to come over and make lymph.' (laughter). Schulz cannily insisted that supervision would need to be in the hands of a medical man (himself) and that the Committee would have to buy the calves and give this Pretoria gentleman a salary. It was unanimously agreed to wire to the gentleman to come to Johannesburg and have an interview with the chairman.

There were wheels within wheels but no record of how they revolved, only strong indications. The District Surgeon of Johannesburg would certainly have been in constant communication with his colleague in Pretoria. As chairman of the Pretoria Smallpox Committee, Messum may well have come frequently to Johannesburg to see how Schulz was coping with an epidemic which sooner or later, must afflict the Capital. Inevitably they would have discussed the lymph problem and Messum, loyal to his patient and friend, would have mentioned Theiler's offer to manufacture lymph and his preliminary experiments. Knobel too, might have taken a hand.

For two and a half years, Theiler had talked his way into the consciousness of effective individuals. He was in any case an outstanding figure in Pretoria – a dark stocky young man, heavily bearded, his hair en brosse and that wooden hand in its black leather glove. In the small Civil Service of the day, he was known to everyone, from clerk to State Secretary. W. E. Bok, lately demoted from secretary to the Uitvoerende Raad to Health Commissioner on the Johannesburg Health Committee, would certainly have known of him and perhaps endorsed his case when Schulz, canvassing support, invoked the help of his colleague, the magistrate van den Berg. In the manner of the times, then and ever, there was collusion behind the scenes. Theiler had been at constant pains to stage it. It had always been manifest to him that it was not what you knew but whom you knew that counted.

On only one point was he at a loss. When he received Schulz' telegram, his diploma and certificate were still in the office of the Commandant-General where they had lain for more than a

year. It took a whole day and all his influence to extract them. On Thursday the 20th May, he took the train to Johannesburg, seeking lodgings with his friends the Ritters. On Friday morning, dressed like a gentleman, he met Dr Schulz in the office of the Mining Commissioner.

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Bull-necked and of Teutonic aspect, Cecil Schulz came from an adventurous family. His father, a doctor (deceased early in 1891 in Durban) had emigrated to the eastern Cape Colony in 1857 as a member of the British German Legion, moving thence to Natal where he became a noted public figure and borough medical officer. He had four sons of whom three became physicians, Aurel and Cecil claiming the most public attention. Trained in Berlin, Cecil practised in Pietermaritzburg, Kimberley, Barberton and Swaziland before settling in Johannesburg in 1890 where, becoming District Surgeon, he shrewdly bought property in the main street, on Hospital Hill and in nearby country at Orange Grove. He never neglected an opportunity to earn an extra-mural penny nor fell into the trap of matrimony. Habitually dressed in a white coat and wearing leather gloves when in saddle or cart, he became a well-known character. Theiler confronted a successful and determined man, if somewhat given to self-interest.

Schulz' version of their discussion, given at the meeting of the Smallpox Committee that night (all the members worked at full stretch during the day and voluntarily at night) was highly coloured to suit his own book and outraged Theiler. His qualifications, Schulz said, having seen Theiler's papers, were satisfactory and he had had great experience in the growing of lymph (now in even shorter supply). A lengthy and detailed discussion followed in which, answering van den Berg, Theiler stated with transparent honesty that the better vaccine that had come from Pretoria was not his but imported. He himself had used five calves but with less success than in Switzerland though he had produced about 500 tubes in three weeks. He proposed infecting three or four calves every day, producing 100 tubes each within two or three weeks. He asked very pointedly whether the Committee wanted pure vaccine or glycerinated for preservation. Dunbar questioned whether a month would be sufficient to prove the experiment and Theiler assured the Committee that he would supply 'lots of lymph' in that time. On the motion of van den Berg, it was agreed that he be employed for one month from the following Monday (two days thence) at a salary of £50, all facilities in premises, calves, labour, etc to be supplied with the assistance of a sub-committee consisting of the chairman (van der Merwe), Hancock, Schulz and Dunbar. (Significantly, Carl Hanau was away at the time.) Theiler was in. Schulz had hinted at permanent employment.

No train could take him quickly enough to Pretoria to tell Emma, now haplessly installed at the Constançon's farm at Les Marais. He was in a state of euphoria, his mind leaping toward the fantastic possibilities which the situation could present – solution of his financial problems, marriage, consorting with the high and the mighty, doing them a service, earning their gratitude, State appointment, riches, fame, ultimate retirement in leisured comfort in die alte Heimat. Throughout his life, Theiler's reach was further than his grasp.

He had only the weekend in which to settle his affairs in Pretoria, leaving on the Sunday for Johannesburg. The break would be final. It was a condition of his employment that, like Schulz, he would be allowed to practise privately and if the position were not permanent, he proposed putting up his plate on the strength of his fame as a vaccine-producer and of all the clients he would get to know in the meantime. Somehow he found a moment to write to his parents – 'I am emigrating today to Johannesburg to stay there. I have been appointed Director of the Institute of Animal Vaccination at £50 a month – 1,250 francs!' and he could not forbear to add – 'my way is open as a result of iron energy and faith in myself'. Later he described himself as

'the Manager of the Lymph Farm'. The images evoked by these glorious appellations came nowhere near the truth.

Taking temporary lodgings, Theiler reported himself on Monday the 26th July 1893 at the office of the Mining Commissioner and chairman of the Smallpox Committee. He was now a temporary civil servant like the other employees of the Committee, costing the Government £500 a month in all – 'eight doctors', said van der Merwe ruefully, 'and one calf doctor!' Sir Drummond Dunbar as Health Officer for the Mines on his staff, had been detailed to provide the necessary accommodation and facilities for the immediate operation of the 'lymph farm' and together with Theiler, went into the town to search for them.

Dunbar was the very pattern of a Scottish gentleman. His title dated from 1697 and he could take precedence over any other sprig of the aristocracy then in South Africa. Of fortune he had none and like many another of his kind, came to the Diamond Fields in 1871 to try to find it. All his life it eluded him despite a great variety of hopeful occupations throughout the land from the Cape Colony to the Eastern Transvaal. Basically a good-hearted well-educated Scot with special sympathy for animals and mankind, Dunbar had been an inspector on the diamond mines, a gold miner, farmer, railway official, town clerk, assistant market master and, rushing to Johannesburg when the goldfields were proclaimed, secretary of the Stock Exchange. This, with his interest and experience in health and welfare matters together with the perpetual shortage of educated men, secured his appointment as Mines Health Officer to the staff of van der Merwe who, through his wife, had strong leanings toward the Scots. Besides being persona grata with everyone, Dunbar was outstandingly conscientious, community-conscious and adept at helpful contributions at committee meetings. At the time he was detailed to organise Theiler's affairs, he was 48, married with a large family and amiably known to the whole town.

There was no question of searching for ideal premises. The Government was about to enforce the provision of its original Proclamation for compulsory vaccination of whites and the Health Committee had already opened centres where its doctors vaccinated without charge. Supplies of imported lymph were both inadequate and bad. Theiler had no alternative but to accept what Dunbar found for him – a stable in Market Street which, thoroughly disinfected, would house his calves with space for postmortems. There was suddenly a shortage and Dunbar at first could provide him with only three heifers though more would follow. He began work the next day. Schulz spoke optimistically in committee of 'the lots of lymph' they would soon have; but, commenting on the 'bad' quality of what was currently available from overseas, van der Merwe ordered by wire 1,000 tubes from Edington in Graham's Town. Some of the doctors had stopped vaccinating as none of the imported material 'took'. It was 'tomfoolery' to continue, they said.

and regarded Theiler's efforts with scepticism.

Great though the urgency, Theiler moved with exemplary caution, impressing Dunbar who duly reported it to the Smallpox Committee. On the first day, he allowed the frightened calves to compose themselves. On the second, he continuously took their temperatures to establish whether they were suffering from disease. On the third, all proving healthy, he infected them with a culture he had brought from Pretoria and awaited the eruption of the characteristic pustules. Much had to be organised in his unpromising premises – glass tubes and other equipment with which to handle the deadly stuff (obtained largely from the chemist Loewenstein whose manager was a Swiss, S. L. Kling), proper packaging, a table for postmortems, disposal of carcases and other detritus, constant disinfection, fodder, water, a thousand cares. He hardly noticed the tragic death of his first proponent, Nellmapius at the age of 46, though the whole town shuddered and in Pretoria, Kruger wept at his bier, saying 'There lies the best patriot of the Transvaal'.

Edington had telegraphed that he was forthwith sending the 1,000 tubes 'full of strength', due

on the 4th August. If they were successful, there would be no need for the 'lymph farm'. Theiler

would stand or fall by his first consignment. The calves were not coöperating. The pustules failed to appear as they had in Pretoria. Then Carl Hanau came back.

Rampaging into the Committee's discussion, he scoffed (as the medical profession did) at the 'lymph farm' and insisted on the vast importation of vaccine from England. At least, he said, a committee of five doctors should inspect what Theiler was doing – hundreds of people might otherwise die. Dunbar snapped his fingers in derision of what such a committee might do 'meddling with calves'. Van der Merwe remarked that English lymph was bad. Hanau insisted. An order for 1,000 tubes from Germany was placed with Loewenstein and Mosenthals were told to get more from England. Within ten days of his appointment, Theiler's position was gravely precarious. Schulz himself might not be able to save him. In early August, the weather was 'vile' and people were clamouring to be vaccinated.

Theiler was undeterred and made studious recourse to his book. Reporters came to see him in his laboratory-stable with its protesting calves. He answered them evenly and inoculated one which 'took' on the fourth day. On the morrow – 3rd August 1893 – he would supply the Committee with 500 doses drawn from his first calf and would then inoculate three more. On the following day, the calf was killed and three doctors – Schulz, van Gorkum and Kanin – testified that it was free from disease. Dr Bourke specifically examined its lungs with the same result. Dunbar reported it all to the Committee. Hanau was confounded. Schulz proposed immediately to issue the new lymph for vaccination purposes. Hanau and Dunbar demurred. They felt it should first be tested. Schulz was instructed to use it on 20 (later 60) persons and report the results. Theiler continued producing. In the town, more yellow flags were flying.

Schulz had told him that if he were successful, he could become the Government Veterinary Surgeon in Johannesburg. He was missing Emma whom he had not seen for three weeks. He moved from his temporary lodging to the house of his friend, the plumber Jakob Ritter who lived on the corner of Market and Kruis Streets, close to the laboratory-stable, and rented a room from him. Ritter was president of the tottering Schweizerverein Helvetia in Johannesburg which on the 1st August had celebrated the National Day, dancing till dawn. Theiler had not attended. His days were too full and too long. At work at 6.30 in the morning in darkness, he inoculated one calf, drew serum from another, bottled and packaged it, killed and examined donor calves while supervising the whole operation and suffering constant visits from Schulz and Dunbar and newspaper reporters. In bitter cold and twilight, he returned to his lodging at 5.30 p.m., worn out but indomitably hopeful, defiant of his detractors, even vainglorious. His triumph would be at the end of August when he sent money to his parents from his first month's

Within a few days, the Smallpox Committee heard the result of Schulz' vaccination tests with Theiler's lymph. They were 91.3% successful, as good, if not better than Edington's which gave 'splendid results'. Theiler's friends at court pressed the advantage home. Schulz hinted that Theiler might be leaving but, challenged by the canny Hanau, could provide no evidence. Van der Merwe intervened to say they would keep him as long as they needed him. Dunbar moved that he be retained for three months and a more suitable place in the country be found for his operations. The chairman clinched the issue by stating that as Mining Commissioner, he would place property on Hospital Hill at Theiler's disposal. The converted Carl Hanau proposed a sub-committee consisting of van der Merwe, Schulz and Dunbar to arrange it.

The newspapers gloated – SMALLPOX COMMITTEE COMING TO THEIR SENSES and SCHULZ SCORES: 'LYMPH FROM THE FARM'. Theiler was not only in but established. He spent the weekend in Pretoria with Emma, now fully accepted by his family. They would get married soon. She had spent seven miserable weeks on the Les Marais farm and a week in town with the Sandoz family whom she liked as well-born and cultured people. Now, while the Con-

stancons came briefly to Johannesburg, she was alone with the children and only raw Kaffirs for company. Arnold had given her his revolver.

Van der Merwe moved with extraordinary speed. The Government, terrified of the increasing 56 outbreak and its probable invasion of Pretoria, poured money into his hands. A substantial building of brick was constructed within two weeks on Hospital Hill. On the 22nd August, the corrugated iron roof was nailed into place and Theiler, his calves and two Kaffirs transferred on 57 the following day. There was stabling for the calves (and later a cow), quarters for the Kaffirs, a

forage room, a postmortem room and Theiler's bedroom. He saved on rent and food, eating some of the slaughtered calves and bartering others for different meat, and drinking the cow's 58 milk. He trained his 'boys' to wash and feed him. At the end of the month, he sent £10 to his

father. His joy was all but complete. Emma would soon be coming.

Professionally, his fortunes varied. At the outset, he had nearly killed his friend Ritter's schoolboy son with a vaccination so undiluted that the boy had reacted drastically. Eighty years later, the nonagenarian Hans Ritter testified to the violent fever, the compresses frantically applied by his parents, the medicines prescribed by Theiler himself and the huge vaccination 59 scars that remained. 'He was a friendly man', the victim (who long survived him) wrote, 'when I got better, he invited me to come and visit him and see his laboratory and slides and microscope.' Now in September 1893, Theiler strayed in the opposite direction amidst furious con-Go tumely. Having bragged to his family in August that he was 'the Man of the Moment - the name Theiler has become as popular in Johannesburg as in Frick – for three weeks, people have read (it in the newspapers', now he had vaguely to write of 'difficulties'. The doctors had turned against him to a man - his lymph was 'sterile', 'useless' (too weak, he himself said, having 62 punctiliously marked the number of the responsible calves on each tube). Hanau flayed him in 63 committee. The newspapers happily made capital of the scandal, After more recourse to his 611 book, properly-tested production was soon resumed. Schulz and Theiler rode the squall without much damage to their reputations. Their relationship was close and pregnant with plans.

Theiler had reason to be distracted. Although the epidemic showed signs of diminishing, he had been assured by Schulz of his £50 a month until the end of the year. Emma ('the darling of the Swiss community in Pretoria parce qu'elle est si gentille') and he needed each other and must 65 marry, even if it meant her working. In the middle of September while abuse rained upon him. she came to Johannesburg, staying shortly with the Ritters and then renting a room with the Heretiers, Theiler's early friends of the Grand Hotel in Pretoria. Madame Heretier occupied herself with small business while her husband organised the meals at the Rand Club, Emma 66 bought a sewing machine and commenced dress-making. Trained in Paris she was soon in demand among the ladies of the depressed town. Arnold, agnostic to the core and Emma hardly less, arranged a civil marriage through his Government friends and together they looked for a house. They found one, owned by a Swiss, Gantner, built of stone with a corrugated iron roof at the huge rent of £11.15s.0d. per month according to Arnold (Emma said £8.10s.0d.) in the least populous part of the town - on the corner of von Wielligh and Pritchard Streets, surround-67 ed by many vacant stands, a few houses and a 'Chinaman's store'. It was not far from the Ritters and about 15 minutes walk to the 'Lymph Farm' on Hospital Hill. Lodgers would help diminish

At 9.30 on the morning of Thursday the 26th October 1893, the 66-year old Special Landdrost. Captain Carl von Brandis united in matrimony in his office in Johannesburg in the district of the Wit Waters Randt Goldfields, Franz Arnold Theiler bachelor aged 26 of Frick, Switzerland and Emma Sophie Jegge, spinster aged 24 of Sisseln, Switzerland who duly signed his register witnessed by H. J. L. Roarda (Theiler's Pretoria friend, a Zurich student) and Walter Kumbruck, 69 the Johannesburg manager of Sandoz' Trevenna brewery. The wedding breakfast, served with Chianti on tables decorated with roses and other flowers, was held at the Commercial Hotel owned by a Swiss, where Theiler had first lodged in 1891. The 'honeymoon' took the form of an immediate three-hour journey by horsecart to the famous Waterfall near Krugersdorp where the happy couple and two witnesses enjoyed a picnic and got stuck coming back. Exhilarated but exhausted. Arnold and Emma finally reached their house at one in the morning where two Swiss were already installed as boarders (Emma later found that they ate her out of house and home and then let the room only). At 5 of the same morning, Arnold was up and away to his clamant calves on Hospital Hill.

His future was still indeterminate. As the weather warmed, the Smallpox declined and his official appointment must soon come to an end. His plans were clear and Emma coöperated in them. The 4-roomed house was large enough to permit him a 'laboratory' where, as the rainy season impended, he intended bringing his continuous Horse Sickness work to successful conclusion with Emma's help. She did everything for him, he wrote proudly (but from the outset, she refused to shave him). They had no servant. Emma washed, cleaned, searched the shops for the cheapest provisions (nothing was prepared as in Europe, she complained, and took much longer to get ready), cooked for four, prepared laboratory cultures in agar-agar, gelatine and other substances, cut sections, recorded results and at night, desperately operated the sewing machine. In the month before their marriage, she had made nearly £8 from dress-making and now, planning to buy their own house, they needed money even more.

Arnold's own income was continuously spent on pathological and bacteriological textbooks which, once more in his good graces, he implored his father to order and send. He was less concerned with his forthcoming private practice (he already had several clandestine clients) than with his researches into the killer diseases. Nothing disturbed his conviction that he alone could solve them. Zschokke's interest and encouragement were stimulating. Powerful too was the prospect of riches. He was planning to derive from an animal immune to Horse Sickness, possibly a donkey, a serum potent enough to immunise horses. Zschokke had sent him the necessary equipment.

Early in November 1893, van der Merwe instructed Dunbar to prepare a report on the 'Lymph Farm'. The epidemic was 'dying out' and its closure must be considered. Dunbar submitted impressive figures. The total cost had been £626.19s.7d. of which £150 had been paid Mr Theiler for three months' service. The vaccine supplied and on hand valued at 2s.6d. a tube totalled £1,224.12s.2d. or a credit balance of £599.12s.7d. If it had been imported at the current price of 3s.6d. a tube, it would have cost £1,100. The Republican Government was sensitive on the point. Under stress, it had imported from the Cape Colonial Government alone 9,375 tubes produced by Edington (whose laboratory it subsidised with £350 per annum as did the Natal Government), and resented its dependence on the Imperial connection.

When van der Merwe put the question of retaining Theiler, Carl Hanau with the visionary attitude typical of the concerted mining industry, at once replied that the Government might wish to continue the work as a national institution. Before abolishing the 'farm', he said, all the facts should be reported to the Government, leaving it to them to decide whether they wished to carry on with it for the benefit of the country. 'Ja!' agreed W. E. Bok, familiar with the background. Cautiously van der Merwe proposed that the town's doctors should be asked to endorse the local lymph as being as good as Edington's for submission to the Government; but Hanau would have none of it and it was resolved to forward Dunbar's report as it stood. Theiler would be retained until the Government replied. The Government did not reply; but the laudatory Press publicity was excellent for his image.

His friends took further action. Dunbar prepared another report embodying 'entirely favourable' medical opinion. He stated that the 'farm' had been a success medically, commercially and

politically (sic) and hoped that the Smallpox Committee would recommend to the Government the continuance of the institution on a national basis. Piling Pelion on Ossa, 'a memorial signed by a number of medical gentlemen expressing the utmost satisfaction with the work carried on at the farm' was submitted. On the motion of Hanau, the Committee agreed to send it to the Government. Theiler's vision of a national bacteriological research institute hovered ephemerally. No word came. Two months later, on the 8th December 1893, the Committee had no option but to terminate his services and abandon what he had so grandly called 'The Institute of Animal Vaccination'. He accepted £25 in lieu of a month's notice. He was free to practise and conduct his own research.

78 The 'truant' Johannesburgers who had fled the town during the epidemic now returned and the 'King' himself came back. Resuming his presidency of the Chamber of Mines, Phillips put all his energies into reviving the slump-ridden industry. It was a sorely stricken town in which Theiler began work early in 1894, very different from the brash and defiant dorp, full of possibility for the veterinary surgeon, that he had visited in 1891 and 1892.

Then, with others, he had stood and watched the happy speculators driving home in the early evening, 'some with splendid teams and the sight was always lively. Now a tall dog-cart, spick and span, drawn by a high-stepping well-groomed horse and driven by a fashionable dame, sitting with arms akimbo high above the man at her side; now an open carriage – with a pair of fiery greys followed by a Cape cart and flanked by a span of depressed-looking mules harnessed to a buck-wagon and driven by an old-time Boer with shaggy unkempt beard, wide felt hat and velschoen all complete. Next, mounted on a mettled horse, trots a rider of the English hunting school in breeches of the latest cut, both horse and man well groomed to the last degree and after him, in direct contrast, a young farmer galloping wildly on a half-tamed colt, the rough rider sitting close to his saddle with his shoulders squared and his long legs thrust straight out while his mount snatches at its bit and tosses its shaggy head in alarm at the unaccustomed sights. And all the while, white-hooded cabs driven by coloured men sweep on in reckless haste, the drivers calling out jeeringly to stalwart Zulus running bare-foot between the shafts of light jinrickshas.'

Now gloom beset the town as the share market dropped and business dwindled. 'Most successful merchants', the *Mining Journal* lugubriously recorded, 'find great difficulty in keeping their trollies employed.' No goods were ordered for delivery and horses and mules stood idle in their stables. By the end of the year, conditions had worsened and 'merchants experienced great difficulty in keeping their staffs engaged'. Things went hardly with the 29 blacksmiths and farriers

- and the 13 livery stables that had flourished with prosperity, but worse with the veterinary surgeons who had aspired to a good livelihood in the earlier booming town. Cammack and the unqualified G. C. Baker tried to ride the storm but newcomers fell by the wayside. W. H. Stan-
- 83 ton M.R.C.V.S. came, advertised grandly and went. James Richardson M.R.C.V.S. started practising in January 1893 from the Masonic Hotel, sought solace with Bacchus and Thespia and in July, smashed up the stalls of the Standard Theatre. He offered to pay for the damage,
- was prosecuted and fined, and bravely remained. Seasonally with the Horse Sickness, Pieter Roux from the Cape flitted between Pretoria and Johannesburg with his spurious 'cure', trying to induce the Transvaal, Bechuanaland and Mashonaland administrations to buy it. Significant-
- 86 ly, sales of the new 'safety' bicycles boomed. Even Lionel Phillips, with a stableful of carriage horses, chose to ride to his office on a bicycle.

During his five months' salaried service, Theiler had collected a small clientéle; but it was

nonetheless the worst time to venture on his own. Some might patronise him but few would be able to pay. He was taking a great risk but his mind and his heart were on other things. From January onward, Horse Sickness would ravage the land and he must be ready with his serum and at least make observations. When winter came, the Smallpox, evidently only dormant, might recommence and the production of vaccine again fall into his hands. On the Health Committee and the expiring Smallpox Sub-Committee, Schulz was still fighting for the permanent retention of the 'Lymph Farm' by the Government, vehemently supported by Hanau and the South African Mining Journal, creature of the Corner House. If Schulz succeeded, he would at last have State appointment. There were even brighter portents. On the Order Paper of the May meeting of the Volksraad was legislation for the founding of an Agricultural Department with veterinary services. He had influential friends to support his candidature as State Veterinarian. It was of the utmost importance to keep abreast of the latest scientific developments, particularly bacteriological, and of every move of his rivals.

Edington had left his laboratory to do a six-month stint as Medical Officer of Health of the 93 Cape Government to determine whether it were the more desirable post, serving during his term on a Leprosy Commission. The aging Hutcheon hopeless ranted against his lack of research facilities and warned his Government that the lethal Lamziekte endemic in the Northern Cape was now spreading. 'The farmers expect the Veterinary Surgeons to know all about these obscure diseases', he wrote, 'whereas these officers know only that they are different from anything they have ever met before' and then, poetically - 'Nature does not reveal her secrets to a haphazard enquirer; she must be closely questioned and her replies require to be verified by test experiments.' Theiler knew all about the Cape Agricultural Department. He subscribed to its Journal (full of valuable overseas information collected by Hellier) and began a private cor-

Go respondence in German with Otto Henning on Hutcheon's staff.

He was not so knowledgeable about Natal where, under the informed direction of the new Governor, Sir Walter Hely-Hutchinson, Wiltshire had been sent overseas for six months to study animal diseases, notably Redwater (then afflicting the Colony) in the United States. Sir Walter was troubled too by another of Nature's secrets - a cattle disease that the Zulus called Nagana which killed thousands every year. The young veterinarian Frank van der Plank M.R.C.V.S. whom Wiltshire had left in charge, could hardly deal with it but Hely-Hutchinson had other resources. He required the British Army to second to him at Pietermaritzburg a medical officer whom he had known in 1888 when Lieutenant-Governor at Malta. During 1894, 2 Captain David Bruce and his wife came to Natal and Theiler knew nothing of it. He was ab-

sorbed in the study of Kitts' Bacteriologie and other works, dutifully despatched by his father. and experimenting with a gas incubator, section-cutters, various stains to reveal bacilli and other apparatus arriving every week to equip his laboratory. Emma, bent over her sewing machine. would be called away to deal with his cultures of bacteria or to mount a specimen on a slide or note a new 'microbe' excitingly revealed. She was already pregnant.

Even in his salaried days, Theiler had written - 'competition with English colleagues is fierce' and when, in January 1894, he publicly intruded on their field, it intensified. Cammack forestalled him with a large and expensive advertisement rendering small and insignificant Theiler's subsequent appearance, using Ritter's postbox number. He made his debut in The Star (at heavy cost) on the 17th January 1894 with

## A. THEILER

## VETERINARY SURGEON

Veterinary College of Zurich and Veterinary Officer of Switzerland Diploma: Late Consulting Veterinary Surgeon to the Artillery Camp in Pretoria and Superintendent of the Lymph Farm in Johannesburg
Has started practice and can be consulted at his residence Van Welligh
Street, Pritchard Street, next Commercial Hotel
P.O. Box 1080. Orders can also be left at Loewenstein's Chemist Shop
Monthly attendance for Large Stables, Dairy Farmers, etc by special arrangement
Apply in English, Dutch or German

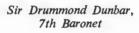
Schutte of the Police, his adjutant Lieutenant Heugh and Sergeant Robertson (possibly canvassed by Constable Tredoux, a compatriot) took advantage of his services at 5s. and 7/6d. a time; also the chemist Loewenstein through his compatriot S. L. Kling; his friend Heretier; Mrs van Gorkum and a few others. Theiler found it hard to press for payment from the friends who had helped him. Few offered it. In January, he made £3.12s. 6d; in February £5.13s.0d. Emma's work on the sewing machine became essential. For Theiler, the worst was not that he had failed 'to make a brilliant start' but that perversely, there were no cases of Horse Sickness in Johannesburg and he was unable to obtain the pathological material he needed (or of Redwater, then accounting for thousands of deaths in Natal and the eastern Cape). His friends in Pretoria had not forgotten him. On the 17th March, he spent precious money to go there to obtain his specimens and to inoculate 500 beasts belonging to D. J. E. Erasmus against Blackleg (Sponsziekte).

Alone among the Boers, Erasmus believed in Theiler and valued his services. He was in addition a good friend and a powerful ally. As Commandant of the Pretoria district, a past member of the Volksraad and once Acting State President, and a doughty campaigner in numerous local wars, he moved in the highest circles and was much respected. His first and abiding love was farming for which he gave up all public office except his military duty. It was said of him that when he dined with the officers of the Staatsartillerie who, under German influence, affected fancy mess dress, he was 'always immaculately attired in irreproachable broadcloth'. A man of unwavering integrity, he continued to throw his great weight behind Theiler and his causes, telling him now that because of his knowledge of local cattle diseases, he had the best chance of becoming State Veterinarian. Much was moving in that direction. At that moment, farmers throughout the Transvaal, Erasmus foremost among them, were being asked to sign a petition for an Agricultural Department to support the proposed legislation. Further, a Glanders Act was being considered and Theiler's Staatsartillerie friends assured him that he would be appointed the State Veterinary Surgeon envisaged in its terms.

Enheartened again, Theiler began advertising in the Standard and Diggers News (he had a new professional rival in E. T. Perossi, 'Certificated Veterinary Surgeon' who lasted for some time) and his practice began to develop. He tried again to persuade Lyss to join him in extending it but confessed he would rather be State Veterinarian at a salary of £700/900 a year with peace and quiet and time for research. Then, with the onset of winter, Smallpox reappeared – in allegedly worse form and with the quasi-redundant Committee in disarray. Cases were increasingly reported in Pretoria.

All doors seemed to be opening for him. His practice greatly improved and he had 'nearly valked his legs off', according to Emma, to find a house in a more frequented area. Now private individuals, notably doctors dependent on their traps and ponies, and commercial firms like the importers Parker, Wood & Co.; Rolfe Nebel; Hyman & Cohen; and others with stables of horses and mules for their delivery trollies, increasingly consulted him. Many failed to pay. In 103 the freezing winter, enduring the discomforts of pregnancy, Emma recorded that in March, he







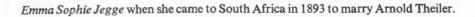
Dr Cecil Schulz



Dr Julius Loevy

The Smallpox Epidemic – an impression by the Illustrated London News artist Melton Prior in 1896 of a 'Boer' watching a Government doctor vaccinating his native staff.









Brick and Corrugated-Iron House rented by the Theilers in van Wielligh Street, Johannesburg from 1893 to 1895. His plate may be seen to the right of the front door.

Over-loaded 'Toast-rack' Horse-tram with passengers outside in Johannesburg in the nineties when Theiler was retained to ensure the welfare of the Tramways Company's scores of horses.



had made £13.18s.6d. and in April £29.7s.6d. The trend was hopeful. He was working very hard, aiming at a regular £50 a month.

At that point, circumstances compelled him to change his ground. The Government had neither built a lazaretto nor made any provision for a recrudescence of Smallpox. Its feeble reaction was to appoint a paid Smallpox Committee of three in Johannesburg. Schulz, ever alert to opportunity, took command of the situation. He offered to supply lymph 'at a price' and constituted himself and Theiler a commercial manufactory despite the chemist Loewenstein being appointed the sole agent for the Cape Government's laboratory at Graham's Town. (During Edington's absence as Cape M.O.H. followed by six months' leave in England, it supplied 14,180 tubes of lymph to the Transvaal Republic – to the chagrin of both Government and Theiler.) Making vaccine at home in his well-equipped laboratory was less troublesome and more rewarding than tramping round the town visiting distant clients who paid irregularly. Emma helped and, if his private practice languished, Theiler did well out of lymph with a total capital outlay of £8 and Schulz sharing the profits. In the first month, he made £80. It could also, with Schulz' influence, lead to other things.

In the meantime, prospects were shaping nicely. The cost of horses to the Staatsartillerie rose of steadily out of hand and, in the estimates for the fiscal year of 1893, exceeded that of ammunition. Losses from Horse Sickness were seasonal but Glanders, as Theiler had warned, was chronic and increasing. In that year, £4,000 was required for upkeep and £1,200 for the purchase of salted horses. The high incidence throughout the land finally induced the Executive Council to publish in the Staatscourant a law drafted by the State Attorney, Ewald Esselen for the control of Glanders which was referred for discussion to the Tweede Volksraad (a satellite body created to placate the Uitlanders). On the 11th May 1894, this energetic assembly appointed a committee of three to examine it. They resolved to consult Theiler at a fee of two guineas a day and, at the instance of the State Secretary, called on his friend the Mining Commissioner to produce Theiler's credentials. Within a few days, he was in Pretoria working in the imposing Government Building for a week on the draft law.

His foot now seemed in the door. The law, if passed, made the appointment of a State Veterinarian essential. He would have to be naturalised to qualify for appointment and he objected strongly to losing his Swiss citizenship. The new draft was printed and on the 11th June, Theiler made further amendments. On the 14th, the Tweede Volksraad reconsidered it in a lengthy debate attended by Kruger and after further discussion, approved it for reference to the Eerste Volksraad which duly enacted it on the 11th July after embarrassing opposition by some members. They alleged that farmers would be 'placed at the mercy of foreign veterinary surgeons' or 'the foreigner imported from Europe'. The cap fitted. The Act was to become operative in January 1895.

Theiler's jubilation was tempered by several factors. The chairman of the Tweede Volksraad, W. J. Pretorius, had assured him that he would be appointed State Veterinarian in the terms of the Act; but he cavilled at naturalisation. Now it was inevitable. He consulted his Government friends in Johannesburg and rejoiced to find that he could hold dual nationality and remain Swiss. It entailed elaborate certification of his original registration in Pretoria by the Veldkornet Melt Marais, identification by his Swiss friends Jakob Ritter and Ernst Lauber, affirmation of his three years in the Transvaal before a Justice of the Peace, similar declaration of his never having been convicted of a crime, and finally his application to the State Secretary which he submitted to his friend J. L. van der Merwe who duly forwarded it on the 9th August. A further testimony was required in September from the Landdrost of Pretoria C. E. Schutte (distinguished by his handsome pair of matching greys) who knew Theiler well; but it was not until the 8th October and the payment of £2 that he received his Letter of Naturalisation signed by the State

Secretary Dr W. H. Leyds and the State Attorney Ewald Esselen. By then ugly changes had occurred.

While Theiler had sat in the Government Building in Pretoria drafting himself into State appointment, General Joubert had stood on the balcony haranguing a great crowd on his forth-coming campaign against the native chief Malaboch who had refused to pay taxes and been generally recalcitrant. Enthusiasm was high. As Commandant of Pretoria, Theiler's friend D. J. E. Erasmus was marshalling the local contingent at Wonderboom. Commandos from other districts were converging on the area. The whole Staatsartillerie were en train, leaving one lieutenant and 10 men at their camp. When the combined force had reached the Blauwbergen in the Northern Transvaal, Joubert and his wife would join them, camping comfortably in their wagons and watching the artillery blast the natives from their rocks.

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Within the letter of the law, the Republican Government had drafted ('commandeered') into its forces a number of non-citizens or Uitlanders of all nationalities without the vote, some, like the lawyer Curlewis and the gentleman-farmer R. T. N. James, at the top of the social hierarchy. Longstanding resentment erupted into furious opposition, petitions were organised and presented to the Volksraad, and appeal made to the British Government to right the situation. Hardly landed from a visit to England, the Cape Governor and High Commissioner for South Africa, Sir Henry Loch took the train to Pretoria, avoiding the inflammable Johannesburg. Kruger met him hospitably at the station and they entered his carriage together. Hooligans detached the horses, mounted one of their number on the box waving a Union Jack and dragged the carriage to the Transvaal Hotel where Sir Henry dismounted. Kruger was left with Leyds, sitting in his immobilised carriage.

Sober citizens rushed to protest the humiliation but the hurt was deep. 'The demonstrators have found no sympathy anywhere', wrote Theiler to his parents, noting the high increase in tension. Slowly he ceased to tell them of what he knew was happening behind the scenes. Kruger, on amiable terms with Loch, withdrew the 'commandeering' but the political temperature remained high. In October, large herds of cattle looted from Malaboch's people were driven into Pretoria for allocation to the combatant burghers, followed on the 10th (Kruger's birthday) by

123 the Staatsartillerie riding in formal order and finally, General Joubert himself in triumphal return and welcomed by the State President.

With Emma proficiently manufacturing lymph by herself toward the middle of the year, Theiler had been able to return to his practice and to the fields opened by his laboratory, now remarkably equipped with diverse apparatus, recently imported when his funds improved. In addition to his own longstanding investigations of various diseases (to which he now added

fowl cholera), he was always susceptible to the venal proposals of Cecil Schulz who, as District Surgeon, now urged that together they investigate Johannesburg's water supply. At some time, some company or official body would want the results and pay for them. In May/June 1894,

125they began examination of the flow from the Johannesburg Waterworks' hydrants. Theiler was not an analytic chemist but an aspirant bacteriologist. The survey was outside his field but Schulz wanted useful evidence when the appropriate moment arose.

Dunbar too, as Government Health Officer on the mines, could refer clients to him in the terms of the Glanders Act and a steady flow of two-guinea fees began to be recorded by Emma. The Tramway Company consulted him about their horses and the number of commercial firms 126 retaining him increased. By June 1894, his practice was a prosperous reality, he stood well with

2 Tall the right people and his prospects were excellent. (The Mining Commissioner himself had written a testimonial to facilitate Theiler's appointment as veterinary surgeon to the Tramways Company.) He could therefore regard almost with equanimity that, despite Kruger's pronounced advocacy and the support of all progressive and some converted farmers, the Volksraad on the

128 11th July again rejected (by one vote - Carl Jeppe who could have reversed the decision, had been called to Johannesburg) the proposal to start a State Department of Agriculture.

Theiler could be patient. For the moment, he surmised, Kruger wanted to save money owing 179 to the expensive Malaboch war but he would come back to the attack, regardless of the flood of petitions from his backveld burghers opposing the proposal. Theiler could wait, imposing on his 1 30 father in the meantime to supply all possible literature on protective inoculation against Gland-

ers and the use of Mallein, and on the organisation of an Agricultural Department of which he knew nothing. As always, his request included more apparatus, more text-books, more scientific

iournals.

131 There was deep distress and unemployment in Johannesburg which worried the Health Committee. The Swiss clung together and, mindful of their National Day on the 1st August, revived the Schweizerverein Helvetia. Theiler became a member on the 19th July 1894 and was immediately elected secretary with Lauber as treasurer. Characteristically he proposed expansive celebrations but Emma intervened. At 5 a.m. on the 27th July (three weeks too early), she gave birth to a son, immediately designated Numero I by his proud papa and later named Hans 137 without the benefit of ceremony. Emma stood it well; but the enormous duties laid on her by the exigency and drive of a young husband in the full flow of ambition, were now too much for her and they employed 'a Kaffir boy' at 15s. a week. She was essential to Arnold's laboratory work if nothing else.

Private practice was never Theiler's aim. Basically he was a teacher in his father's pattern, secondarily a researcher and only superficially a practitioner. However well he might train assistants, his one-handedness made operating difficult as well as other techniques of his profession. In a practice no different from that of any European town, he complained to a friend in

134 Switzerland, there were no opportunities for research or even for obtaining pathological specimens. He did not mention that 'the fierce English competition' had increased by the arrival of

135 two members of the Royal College of Veterinary Surgeons - the recently-qualified Osborne A. O'Neill and the experienced E. A. Hollingham who was long to figure in Theiler's life. They might rob him of some of his veterinary thunder but not of his influence in the local corridors of power. He expected to leave Johannesburg when the Glanders Act was fully implemented and, naturalised, he was appointed State Veterinarian. In the meantime, Schulz worked for their mutual benefit.

The new Smallpox Committee of three paid members with W. M. Struben in the chair, took office only in August and promptly ordered vaccine from Graham's Town. It then appeared to 136 them that European lymph was a failure, Edington's was too dear and the Schulz/Theiler pro-137 duct was stated to have a 91% success. They accordingly renewed the contract. Theiler crowed 138 over his 'most dangerous adversary whom he had expelled from the field'. On the Health 139 Committee, Schulz had more difficulty.

The annual epidemics of typhoid, diphtheria and dysentery again cast suspicion on the water supply (now claiming the Government's attention as inadequate to the expanding town). Schulz 140 tried to force his and Theiler's analysis on the Committee and met violent opposition. The Committee had already received a report from the much-respected Dr Julius Loevy who had returned from Europe in November 1893 with the latest apparatus for chemical analysis and who,

14 in fact, read his paper on the subject to the local Chemical and Metallurgical Society a few nights later. The Committee considered Theiler's report, based on his observations in May/ June 1894, which Schulz suggested should be extended and mock was made of his proposal to employ a veterinary surgeon for the purpose. Such was his influence however that he secured Theiler's retention at a fee of £20 to undertake the work.

The derisory publicity in the Press may have done Theiler's image no good but he conscient-

iously performed his task with the apparatus at his disposal. On the 15th May 1895, 'BACTER-IOLOGICAL EXAMINATION OF WATER taken from the Waterworks' hydrants at Johannesburg during the months of January, February, March and April 1895 by Cecil Schulz M.D. and Mr A. Thieler (sic)' was printed. Little notice was taken of it. Loevy was a towering figure in the field. Theiler sent a copy to his father inscribed to 'Herrn Theiler, Rektor in Frick – With the Author's Compliments'. He hoped it would commend him to the Government's attention.

His ear was always close to the ground and he knew far more than he ever wrote his friends or family. He had become a past master at assessing and manipulating a situation. When he was formally naturalised in October 1894, his way was clear except for one factor. But for that, he would immediately have left Johannesburg for Pretoria. W. J. Pretorius, chairman of the Select Committee on the Glanders Bill which he had advised, had commended him highly to the State Secretary and proposed his appointment as State Veterinarian, duly minuted. J. L. van der Merwe (whose horses he treated), in his capacities as Mining Commissioner and chairman of the original Smallpox Committee, had provided a glowing testimonial and it seemed he could not fail – but there was no accounting for the vagaries of the Republican Government. It was even possible that the Glanders Act would not be fully implemented. Boundlessly energetic, Theiler

ordered more literature and equipment and devoted his free time to reorganising the Schweizerverein, now numbering 42 members listed in his own hand (many of whose descendants – Tribelhorn, Schaerer, Oettli, Bodmer, etc. – became notable South Africans) on a military basis.

Now a citizen of the Republic, Theiler could see what was coming.

Under the guise of a 'Section á Tir', it was proposed to arm members with rifles and revolvers.

The new consul Fehr, enrolled as a member in July, stated that the Government would have no objection. Theiler, who wrote the Minutes in German while Charles Favre recorded them in French (the Society was strictly bilingual), was not elected to the appropriate committee and in the excitement of organising a Swiss Fête, the Section á Tir languished and was dissolved. Early the in 1895. Theiler was elected president and having ascertained from the Consul that the Government

in 1895, Theiler was elected president and, having ascertained from the Consul that the Government required a formal request from the Society to bear arms, energetically pursued the matter and pestered his father and others with requests. He wanted the 1889-model issued by the Swiss

Military Department for purchase by his members. At the middle of 1895, he was still trying. By then, the political situation had sharply deteriorated.

In every sphere except the one after which he most hankered, the State, Theiler's affairs prospered. His practice, with a small regular income from the Tramways, was steady and included influential clients such as doctors, civil servants, the Police, numerous commercial firms and subsequently famous Johannesburg institutions such as the Nazareth Home and Marist Brothers

College. It had briefly been suspended in September 1894 while he went on invitation to Natal, making many friends among the farmers and increasing his knowledge of Horse Sickness, Redwater, Anthrax and the resident plagues. Wiltshire and young van der Plank in their reorganised department struggled to cope with them and the farmers suggested that Theiler should join them. Instead, he had hurried home to deal with the new lymph contract which produced satisfactory support for his wife and son. He hated it all. With his little laboratory, full of modern equipment, he longed to investigate the cellular causes of animal diseases.

When he publicly trenched on that field, the combatants comprised Edington (the only fully-qualified bacteriologist in African South and now refreshing his knowledge in England) and 149 competent English competitors. In November 1894, Theiler wrote a long letter to the Standard and Diggers News recommending phosphoric and calcarous salts as a cure for 'Stijfziekte' (Stiff Sickness) in horses. Hollingham who had been an examiner at the Melbourne Veterinary 5 College, promptly challenged him in highly technical hypotheses on the natures of horse-diseases

such as Osteoporosis, Osteomalachia and Rachitis, generally discrediting Theiler's facile cure and forcing him to reply. Hollingham returned with sarcastic comment that 'he was in no need of instruction in chemistry from Mr Theiler' and demonstrated that his 'cure' was nothing new. Theiler retired from the scene. He had done himself no good with immature publicity. Osteoporosis and Osteomalachia were to remain with him until his death.

Professionally he was making his way with outstanding success but it was not the way he wanted. While Emma remained at home incubating interesting colonies of bacilli relating to Horse Sickness, Anthrax, Redwater, etc – the key to real riches – he would be tramping the town upon the most banale occasion, treating split hooves, prescribing calomel for colic, relieving saddlesores and abrasions and the like, sometimes going to Pretoria to inoculate cattle against Lung Sickness and other ordinary duties. It made good money but exacerbated his aspirations.

At the end of 1894, the town burst into a Boom and the share market rocketed. The reason, Theiler stated darkly to his parents, was the arrival in the Golden City of Baron Rothschild whose presence stimulated the buying of gold shares on the Berlin and Paris markets. The Yuletide jollity of the Johannesburg scene was further enhanced by Fillis's Circus, a famous institution long absent in India and Australia and now returned in great glory with Madame Fillis, a notable equestrienne, riding a magnificent chestnut horse Victory and Frank Fillis displaying among his animal oddities 'a hairless mare' of immense rarity and cost from Australia.

Ferdinand James, Baron de Rothschild, during his three week visit to South Africa, was taken to 'Phyllis's Circus' in Johannesburg (always a stylish and glittering occasion) and later commented on the trained wild animals and particularly 'the Australian hairless mare'. It was Fillis' prize piece, his main attraction and it went into a decline. Fillis sent for Theiler. Other horses in

159 his troupe were 'suffering from some mysterious malady'. Theiler did what he could but failed to 160 save the hairless mare. He charged Fillis £4 and said nothing to his parents about sinking so low.

He could not avoid telling them of the wrecking of his hopes. On the 1st January 1895, the Glanders Act came fully into operation but no State Veterinarian was gazetted. The most authoritative assurances had been given him that he would be appointed. He was on sufficiently good terms with the State Secretary, Dr W. J. Leyds that he 'would beard him in his den'. But Leyds was not in his den – he was at home suffering from 'an affected throat' which ultimately drove

162 him to Europe for specialised medical treatment. In the meantime, the Government intended

employing Theiler on an ad hoc basis and, at four guineas a day, sent him to various places along the Reef to investigate cases of Glanders. It was cold consolation and little comfort came from the derided water-analysis which he had then begun. Only his correspondence with Zschokke who had published his article on Quarter Evil in 1894, encouraged his love of research.

From time to time, nebulous propositions (from sources other than Schulz) were made him.

In July 1894, a man had offered to subsidise his experiments to derive a serum against Horse Sickness; but Theiler then preferred to await his official appointment when he could make them Ic5 for nothing. By December, despairing, he had saved £100 to buy his own experimental horses. He had already expended hundreds on buying his apparatus (mostly from Germany), books and journals. The annual mortality from typhoid and diphtheria exercised all responsible citizens and a doctor brought him for testing a culture in gelatine of diphtheria used for inoculation. Others wanted to take advantage of his bacteriological skill. In February 1895, the founding of a bacteriological institute was mooted with support from 'some top financiers' (probably the visionaries in the Corner House, ever with their eye on a stable labour supply) and the Health Committee. Its first object was to make diphtheria serum and its protagonists, certainly motivated by Schulz, invited Theiler to become the veterinary collaborator. He accepted with reservations, hoping always that his State appointment would eventuate. It seemed impossible in Johannesburg to dissipate the image of 'the horse doctor'.

The Boom continued and with it, Theiler's fortunes. Glamour, as Rothschild copiously noted, returned to the Golden City and the thoughts of the pioneers turned to matters other than mere survival. After months of struggle, J. L. van der Merwe, his subordinate Sir Drummond Dun-

bar and a committee of local enthusiasts succeeded in staging in March 1895 the first Agricultur-

al Show. Theiler, Hollingham, the tenacious James Richardson and a new competitor F. A. Britten were appointed honorary veterinary surgeons. Frank van der Plank came from Natal as a judge of horses. Kruger himself arrived by train from Pretoria to open it. The atmosphere was amiable and the Show, comically chaotic, was accounted a success. The Agricultural Society enthusiastically planned the next as well as wider activities, including the issue of an Agricultural

170 Journal. Dunbar was deputed to ask Theiler whether he would serve as co-editor. Inhibitive

events overtook the proposal.

The hand of Dunbar was to be found in any enterprise of community benefit and in few was he more concerned than in alleviating the shocking cruelty to animals. Excessive use of the whip, overloading horse-trams, the torture of driven animals whose harness-sores, ulcers and open wounds were concealed by black axle-grease, torn shoulders, broken knees and other horrifying

172 sights were commonplace in Johannesburg. The King and particularly his wife, Mrs Florence Phillips, had long been concerned and finally, in June 1895, a branch of the Society for the Pre-

173 vention of Cruelty to Animals was formed with Sir Drummond in the chair. Theiler became a member and was one of several veterinary surgeons who gave evidence in cases brought to court

by the inspectors of the Society (which was allocated a third of the fines imposed).

He was now firmly in the charmed circle of Government officials in positions of power. W. R. Bok, the Government Health Commissioner, van der Merwe, Dunbar, Schulz and the landdrosts were his friends. It suited their purposes to exercise influence on his behalf. Hygienic conditions in Johannesburg were on all hands deplorable. The mule-drawn 'sanitary carts' (known as 'Kruger wagons') for the removal of night soil were driven at breakneck speed by boisterous under-paid natives racing their colleagues, frequently spilling their contents at corners or overturning completely. The water supply was highly suspect. Dairies drew their water from wells into which sewage and stable effluent flowed. Infectious and contagious diseases abounded among animals. Cows with Lung Sickness and Tuberculosis were milked alongside others in dairy byres. Glandered horses wandered about the Town and were even reported as rubbing

175 themselves against the stables of Theiler's Tramway teams. The Health Committee with Dr Schulz in the chair, listened to the reports of the new town Health Officer, Dr T. C. Visser and

A. H. Bleksley, its Sanitary Inspector. On the 29th April 1895, Schulz proposed the appointment of a Veterinary Surgeon and it was agreed to call for applications stating fees required.

Six applied – E. A. Hollingham, James Richardson, F. A. Britten, Osborne O'Neill, George H. Pickwell and A. Theiler. With the exception of Theiler, they were all qualified members of the Royal College of Veterinary Surgeons. A sub-committee of three examined the applications. On the 20th May, that of the Heer Theiler was accepted, subject to his agreeing to detailed fees not exceeding two guineas a day and to appointment at the pleasure of the Committee. He did so

by letter and was confirmed in the post on the 31st May, subsequently being authorised person-

ally to order the destruction of cattle.

His friends went further. A week later, van der Merwe arranged for him to be appointed to the Mines Health Department under Dunbar. He became responsible for animal welfare on all the mines and at the same time, continued intermittently to be employed by the Government to investigate outbreaks of Glanders over a wide area. The lily was further gilded by improvement

in his practice. In the middle of May 1895, he had at last been able to afford to buy a horse – 'a beautiful pony which pleases me as I can do real work with it!' In one month, he wrote triumphantly, he earned more than Peter Lyss in a year in Switzerland. But his heart was not in his work,

nor in the Schweizerverein Helvetia over which he dynamically presided, nor in the speculative schemes which Schulz (who had bought some property and intended employing him as a poultry and pig farmer) and others proposed. His eye was on the Volksraad then sitting in Pretoria and, at the urgent insistence of Kruger, again considering the institution of a Department of Agriculture. It would be his proper place as State Veterinarian.

On the 20th June 1895, twenty one petitions from the Zoutpansberg in the north to Bloemhof in the south (Pretoria's headed by his friend D. J. E. Erasmus) stood on the Order Paper. This time, Carl Jeppe was there, thunderously to support them in the face of determined opposition, some of it nettled by their annual recurrence. Theiler's member, Johannes Petrus Meijer representing the Witwatersrand Goldfields, a progressive farmer and pillar of the new Agricultural Society but a reactionary politician, spoke lengthily in opposition. He had tried all the new ideas introduced by the Cape Agricultural Department (presumably including the ladybirds), he said but could well do without them. Others were equally emphatic. Yet the progressives prevailed, and by a slight majority, resolved to appoint a commission to investigate and draft the structure and regulations of a Department. Its chairman was D. J. E. Erasmus and the members included the early proponent Dr J. J. Pronk, J. J. Enschéde (known to Theiler as an executive member of the Pretoria Agricultural Society and later first chairman of the Transvaal Agricultural Union), and his Irene estate colleague, Hans Fuchs (who in fact withdrew). The Commission took five months to make its enquiries and draft its report; but he knew he would be safe in its hands.

He hankered increasingly after Pretoria. The aspect of the Golden City grew daily uglier. In the early days of the Boom, there had been an uncontrollable outbreak of lawlessness. The highest and lowest suffered burglaries. Theiler's clothes were stolen off the bed while Emma and he slept in their locked house, guarded also by their lodger, the Swiss chemist Dr Kleiner. Lynch law was mooted. As the Boom rose to hysterical heights, values grew more unrealistic. Ritter who had bought his house in 1891 for £500 was offered £5,000 for it. Theiler lamented that he could have made a fortune if he had not spent his savings on books and apparatus. Tall buildings were rising everywhere. The Tramways extended their lines. Stock brokers punched each other on the nose in the Exchange. The expected 'Crash' came in the middle of 1895 with 'doleful weeks' and 'the market in a state of deadly inactivity'. With equal suddenness, buoyancy was resumed.

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For reasons of State, Kruger organised an exceptional ceremonial occasion. The restiveness and disaffection of the Johannesburg Uitlanders (from whom the mining magnates ostensibly held themselves aloof) was now overt. Some years before, they had organised themselves into the Transvaal National Union which now vociferously protested their legal and other disabilities. The magnates associated themselves with the politicians in Whitehall who claimed that since 1881, Britain had retained suzerainty over the Transvaal, and with the arch Empire-builder, Cecil Rhodes whose partner, friend and adviser, Alfred Beit had closely inspected the South African situation from April to July 1895. There could be no stability in the mining industry, let alone the Transvaal, while atavism ruled the roost and the wildest speculations were openly canvassed. The opening of the Pretoria-Delagoa Bay Railway in July 1895 enabled Kruger firmly to assert that he was independent of the British, that he now had his own access to the sea without requiring the use of Colonial ports and that he intended running his own country his own way. He made full use of it.

All the Colonial administrators were his guests – the dotard Sir Hercules Robinson (whose return to the Cape had been arranged by Rhodes); Natal's enterprising Sir Walter Hely-Hutchinson (awaiting the outcome of David Bruce's forthcoming investigations into Nagana in the wilds of Ubombo after seven months of Redwater research in Pietermaritzburg); and Sir Sydney Shippard, administrator of Bechuanaland whose arid territory had strategic im-

portance for Rhodes' railway to the north but no agricultural future owing to Lamziekte. Pretoria and Johannesburg, for different reasons, were extravagantly bedecked and decorated. The Capital's ceremonies over, the Governors came to Johannesburg where Phillips presided at a banquet for them and the Uitlanders wildly toasted the Queen and her representatives.

Stimulated by these encouraging signs and a record June production, 'great excitement and spirited dealing' on the Stock Exchange immediately heralded another Boom, admittedly transient though early in August, the sober *Mining Journal* could still report 'the intense excitement which culminated in one of the wildest maddest scenes, utterly beyond the power of anyone to describe'. By October, prices had collapsed and a Slump ensued, accentuated by Kruger's threatening as a disciplinary measure to close the drifts across the rivers on roads bringing animal-drawn transport to Johannesburg.

His family and friends in Switzerland could have been forgiven for thinking that at this hectic time, Theiler lost his reason. The epitome of success and making unprecedented money as 'Government Veterinary Surgeon' (which he came to be called through appearing in court cases), his practice continuously increased, his work for the Health Committee became more rewarding and the Pretoria Government kept him actively in mind, sending him on well-paid 190 missions by coach and cart to outlying districts (Springs, Nigel, Heidelberg, etc) for Glanders outbreaks as well as commissioning him to advise whether it was desirable to offer a prize for a cure of Lung Sickness. With his star spectacularly in the ascendant, he frivolled with the Schweizerverein (organising fantastic celebration of the 604th National Day on the 1st August), gambled on the Stock Exchange (losing his money) and took time off to travel to Witfontein near Krugersdorp to stake a claim in the Mine Lottery which the Government officially staged. He also bought a camera and acquired a time-wasting hobby while writing piously of his attempts to find an immunological serum against Horse Sickness. On the 11th August 1895, he wrote baldly to his bewildered parents - 'I must now tell you that I am completely giving up my veterinary practice and will leave Johannesburg to establish myself as a farmer . . . The reasons for giving up my practice are of a purely financial and speculative nature.' His father of course was asked to send all the relative information and books on farming.

Thence on ward, Theiler was almost too pressed to write at all but did reveal that in association with a friend (Tel Sandoz), he was starting a pig and poultry farm which would render large profits. He had already bought a property with a house on it and he gave as his reasons that through lack of clinical material, he could not pursue his researches or writings in Johannesburg but would be able to do so on a farm, and that it would be advantageous to be at hand near Pretoria if at length his State appointment eventuated. At the end of September, he sent in his notice to the Health Committee 'severing his connection as Town Veterinary Surgeon' and the members, as aware as he of the explosive nature of the times, reluctantly accepted it and resolved to invite applications for a successor. On the 21st October 1895, he hurriedly sent a postcard home: 'Everything must in future be addressed to me at Box 274, Pretoria. I am going there this week.'

Theiler very well knew what was happening. Keenly observant and trusted by Government servants and private clients alike, he had no difficulty in assessing the situation. 'The visitor had hardly installed himself in an hotel in Pretoria', wrote the later Viscount Bryce of his impressions of that time of tension, 'before people began to tell him that an insurrection was imminent, that arms were being imported, that Maxim guns were hidden and would be shown to him if he cared to see them. In Johannesburg, little else was talked of – not in dark corners but at the club where everybody lunches and between the acts of a play.' On the 12th October, Theiler told the Schweizerverein Helvetia that he was leaving Johannesburg and had to resign as president. He attended one more meeting on the 26th, speaking passionately against an article in the Neue

Zurcher Zeitung representing the attractions of Johannesburg (then without water through prolonged drought, crippled by influenza and full of unemployed) as a suitable place for Swiss immigrants, and demanded that it be referred to the Swiss consul who would know better.

Kruger declared a Day of Humiliation on the 3rd November in respect of the continuing drought and the on-coming locusts. The Theiler family concluded the difficult transfer of their property, laboratory and all, to a little tin house on a small holding at Les Marais north of Pretoria and about  $2\frac{1}{2}$  miles from Church Square.

On the 21st November, Lionel Phillips made his provocative speech when opening the new building of the Chamber of Mines in Johannesburg – 'a really fire-eating speech against the Government', Theiler told his parents though not himself a witness. 'Now it is more the labour that is against the kingly establishment as they would rather have a bad Boer Government than a capitalist clique. It is said that things are getting strained. Yes, the big-mouthed Englishmen always want to play the master and to rule and believe that they and they alone do it properly.'

On Sunday the 29th December 1895, Jameson left Pitsani with a mixed force of Bechuanaland and Rhodesian (British South Africa) Police on his ride to Johannesburg. By that time, Theiler in Pretoria had 'saddled my horse and shouldered my rifle to stand in the breach for my new Fatherland'.