

## POSTSCRIPT

1 CHARLES TE WATER, High Commissioner for the Union of South Africa in London, immediately took charge upon Theiler's death and cabled his Government. When Max had been found and the relative papers signed, te Water organised a Memorial Service at Golders Green  
2 prior to the cremation. The London *Times* published a two-column excellently-informed obituary notice on the following day and the world Press carried the news. When the service was held on the 27th July 1936, Lady Theiler was supported by her son Max, her brother-in-law Alfred and his wife who had come from Switzerland, Mr and Mrs te Water and many of Sir Arnold's associates – his historic ally F. B. Smith, Sir Frederick Hobday of the Royal Veterinary College, W. H. Andrews of the Bureau of Animal Health, Harry and Kate Green, Alexander Holm of East Africa, Mary Gunn of Pole Evans' staff, Dr B. D. Pullinger previously pathologist in Pretoria, many London Swiss, Union Government officials and personal friends. On the  
3 coffin lay a wreath inscribed (by P. J. du Toit in a cable) 'In reverent memory of a life of devoted service to the people of South Africa from the Government and people of the Union of South Africa'.

4 Charles te Water took possession of the ashes to save Lady Theiler the trouble of transportation to South Africa as she wished, undertaking to deliver them officially when their destination had been determined. He had conveyed to her a message from the Prime Minister General  
5 Hertzog offering the sympathy of himself, the Government and the people of South Africa, and a similar message from the Minister of Agriculture, Colonel Denys Reitz – 'all the members of his Department ask to be associated with the Minister's tribute to a great public servant' –  
6 and many others. Te Water, a man of lively aesthetic appreciation, then conceived the idea of using Steynberg's bust, still in clay and locked in a store-room in South Africa House, as a memorial to Sir Arnold.

7 The lamentations of the world at large reached Lady Theiler immediately in cables and telegrams and for many months thereafter in private letters and official publications. Distinguished scientists in Europe and America wrote personally, mostly in their own hands in English, French and German, testifying to Sir Arnold's great qualities. Few of these expressions were perfunctory. The learned societies likewise all took formal resolutions, noting Theiler's particular association with them, were if Fellow or Life President or Honorary Life Member, and communicated them to her. A. E. D. Rivett (later Sir David) of the Australian Council for Scientific and Industrial Research was in England at the time and wrote her with particular appreciation. He included a message received by cable from Sir George Julius and the official condolence of the Australian Government. Rivett referred to Theiler's inspiring example and the loss of 'a leader and friend'. F. B. Smith wrote of him as 'one of the best and most considerate of colleagues'. In common with Dr Henrici, Pole Evans and Theiler's erstwhile secretary, H. W. R. King referred to him as 'the best friend I ever had'. The final-year students at Onderstepoort whom Sir Arnold had lectured only three months before, composed a suitable message to Lady Theiler which they clumsily typed and all signed.

8+9 A vast number of tributes were published world-wide in many languages – by Max Kupfer in the *Journal of the Zurich Naturforschende Gesellschaft*, by Werner Steck in the *Schweizer Archiv für Tierheilkunde*, by Gustav Senn in the *Journal of the Basle Naturforschende Gesellschaft*, by Alfred Theiler in *Lebenbilder aus dem Argau* and by others in many Swiss journals  
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12 (not always accurate). Dr Rössle of Berlin published his tribute in the records of the *Deutsche*

13 Pathologische Gesellschaft. Similar memorial accounts appeared in English, Spanish, Dutch,  
14 French, American and other scientific journals including *Nature* (contributed by Sir Frederick  
15 Hobday) and the *Veterinary Record* (of which Harry Green was probably the author). Nor was  
16 Theiler forgotten in Australia and other parts of the Empire. In 1948, British Commonwealth  
Leaflets issued an outrageously inaccurate 'Theiler of Onderstepoort 1867-1936' in tribute to  
'one of the greatest of all veterinary scientists'.

17 P. J. du Toit was immediately approached by the South African Press to contribute an ap-  
preciation which he wrote in understandably emotional terms, commenting as so many did,  
on the shock of Sir Arnold's death when he had seemed so robust and still full of joie de vivre.  
18 Du Toit's affection and sense of loss also emerged in 'The Life and Work of Sir Arnold Theiler'  
which he wrote in association with Cecil Jackson, editor of the *Journal of the South African  
Veterinary Medical Association* for a special Memorial Number. Similar tributes were paid in the  
19 *South African Medical Journal* by Adrianus Pijper and in the Proceedings of the 30th Annual  
20 Meeting of the South African Association for the Advancement of Science which took place in  
Johannesburg in October 1936 with Gertrud attending. Many inaccuracies were perpetrated  
in lay journals, the popular Press and later in memoirs and autobiographies, but the sense of  
loss was common.

Du Toit's veneration and affection for 'the old man' had deepened during Theiler's 15-month  
stint at Onderstepoort and he was determined that he should be permanently commemorated.  
When his deputy Gilles de Kock went abroad, he instructed him to consult the High Com-  
21 missioner in London about Steynberg's bust. Te Water was at the League of Nations in Geneva  
when de Kock called but later confirmed his support of du Toit's proposal to purchase the  
22 bust by public subscription and to endow scholarships in veterinary and other research. Du Toit  
mooted his scheme with the Prime Minister General Hertzog who was 'most interested' and  
with Cabinet Ministers but nothing developed until Smuts took a hand. Reading Pijper's tribute  
23 in the *Medical Journal*, Steynberg wrote to du Toit in January 1937 offering his services if a  
monument were needed.

24 Du Toit energetically continued his lobbying under the cold eye of the Secretary for Agricul-  
ture, P. R. Viljoen, who continued to harbour a grudge against Theiler for alleged insufficient  
credit for his Lamziekte work - but du Toit had the ear of Smuts. In March 1937, the Union  
Cabinet in an unprecedented move (encouraged by buoyant revenue) decided to allocate £2,000  
25 from Additional Estimates to erect a statue commemorating Sir Arnold Theiler of which £500  
was to be made available for immediate expenditure. Du Toit at once asked Viljoen who was  
going to London, to raise the matter of Steynberg's bust with Charles te Water. The idea was  
crystallising that Steynberg, the only sculptor to model Sir Arnold, would need the bust to help  
him with a statue.

26 When called to Cape Town during the session, du Toit on the 21st April interviewed J. S.  
Cleland, now Secretary for Public Works, who had long known Theiler during extensions to  
Onderstepoort, and discussed the project with him. Cleland thought the memorial should be in  
front of the main building. Du Toit then called on General Smuts who felt that he, Denys  
Reitz, Cleland and du Toit should constitute a committee in Pretoria to discuss details. He  
agreed that Steynberg should be the sculptor. Du Toit went on to Reitz who, typically, wanted  
nothing to do with it and was 'quite prepared to leave it to General Smuts and myself'. The  
27 matter then hung fire but du Toit warned London that he was trying to have the bust bought  
to aid Steynberg with the statue.

28 Public Works then became restive at the delay and sent its emissaries in the persons of C. A.  
Cilliers (Acting Secretary in Cleland's absence) and H. M. Mollison, Chief Architect, to On-  
derstepoort on the 21st June to discuss the proposal with du Toit. London, similarly restive,

29 had summarily shipped the bust to du Toit and it arrived at the point when, after discussions with Steynberg, Public Works had clarified a project which now only needed Smuts' approval. 30 P.W.D. had bought the bust modelled in clay from Steynberg for £105 and it was subsequently on view in the Department. All were agreed on the site of the statue. It was felt that marble would turn yellow and bronze, which would have to be cast at high cost overseas, would turn black. Steynberg pressed for granite and after long consideration, advised that his fee would be £2,000 for granite and £1,700 for bronze. The plinth would cost £700 and Treasury would have to add £805 to the £2,000 already voted if granite, which Cilliers approved, were used. There was no dispute over Sir Arnold's ashes being placed in the base of the plinth nor disagreement over the inscription of his name only.

31 Du Toit immediately sought an appointment with General Smuts for Viljoen, Cilliers and himself and on the 26th August 1937 he received them in his office at the Palace of Justice, excusing Viljoen who was unable to be present. Smuts approved the proposal in toto, asking 32 only that it be undertaken forthwith and that a decision on the addition of 1867-1936 to Theiler's name be considered.

For Steynberg, the commission was gratifying in many ways. With the help of the bust and numerous photographs, he set to work on a clay model and on finding locally a block of granite adequate to hew into a figure one-and-a-third lifesize. By November, he had completed the model. Lady Theiler was then staying with Margaret in Johannesburg (after two months with Hans and Eleanor at Onderstepoort which she hated) and was invited by du Toit to accompany him and Cleland to Steynberg's studio to inspect it. To Gertrud, travelling overseas, she wrote – 33 'Steynberg has completed the model (one third actual size) for the statue of Pa. He is sitting in his office in Lab. coat and holds a microscope against his body with his right hand. The face and the position are good but the microscope must go. It looks absolutely ridiculous.' Steynberg 34 took it away and substituted a pleximeter. His search for granite had ended at a small kopje 35 not far from Halfway between Pretoria and Johannesburg. Blasted out of a huge boulder, the great block was brought to his studio and he worked on it for more than a year.

Early in 1939, the Public Works Department began building the tall plinth on the circular lawn outside the entrance to the main building, distinguished in Theiler's day by a lofty palm. 36 Te Water had sent the funerary casket and du Toit asked Lady Theiler by telegram to Wellington where she was staying with Gertrud whether she wished to be present when it was sealed into the base though no ceremony was contemplated. She deputed Hans to represent her. The statue was also ready but it was not until November 1939 that it could be unveiled.

In the time intervening, South Africa had traversed an unparalleled period of crisis resulting in Smuts and his supporters in Parliament defeating Hertzog's motion of neutrality in Hitler's war. Hertzog called for the dissolution of Parliament but the Governor-General Sir Patrick Duncan refused and on the 6th September, summoned Smuts to form a Government. The Union was totally unprepared for war. In his 70th year, there fell on Smuts the herculean task of marshalling and reorganising his country's every resource and initiating services previously considered beyond its need or competence. No greater tribute could have been paid Theiler than that, nine weeks later when in the throes of superhuman labour, Smuts found time to compose a personal and thoughtful salute to his friend and to come to Onderstepoort to unveil his statue.

37 On the afternoon of the 15th November 1939, rain teemed in unceasing torrents and the unfortunate du Toit was compelled to accommodate the large convocation (including Lady Theiler, Hans and Eleanor, Margaret and Gertrud) in the Faculty Lecture Theatre to hear the speeches. Smuts spoke with deep sincerity (see Appendix D), mentioning Theiler's 'artistic temperament' when frustrated and his collisions with various Ministers but computing his

stature in certain terms. 'I have sometimes felt', he said, 'that in the years past, I did not do my duty and give his name to this place. It is now too late for that. This could have been "The Arnold Theiler Institute". However, the opportunity was missed and in the meantime, Theiler himself made Onderstepoort's name so world-renowned that it cannot be changed . . . He was also a great personality – sincere, straight as a die, powerful, enthusiastic and utterly devoted to his work. The upshot of it all is that he has left his soul behind him here. For Theiler is not dead. His spirit animates his place. Let us hope for the good of the country and of the world that the Theiler spirit will continue to live and flourish for generations to come.' Then Smuts put on his raincoat and went out with a few guests into the downpour and, in the presence of a few Africans who had worked for Theiler for many years, pulled the sodden cover off Steynberg's work. He walked across to speak to the Africans for a few moments and was taken away in his official car to the Union Building to continue preparing for war.

38 He had stated that it was the first and only occasion on which a monument had been erected to a great man by the Union Government. Subsequently the claim was made that no other State in the world had erected a memorial to its own paid servant. In 1948, when on a goodwill mission to South Africa, Viscount Bledisloe bought a wreath in Pretoria and drove to Onderstepoort to lay it at the feet of his old friend. In March 1967, on the centenary of Theiler's birth, his niece Klara, deputising for her father Alfred who was too ill to come, journeyed from Switzerland to join Margaret and Gertrud in a similar salute.

39 Other memorials were instituted. In 1938, the South African Biological Society struck the 'Theiler Memorial Medal' for award to students on the Veterinary Faculty of the University  
40 of Pretoria. In subsequent years, 'Theiler Memorial Lectures' given at intervals by distinguished scientists were instituted by the University. In the Public Library at Berne in Switzerland, Theiler's portrait figures among a gallery of Swiss notabilities and his work is recorded in a number of similar commemorative books.

41 Steynberg who was always proud of his first portrait bust, had made a copy of it for his own collection but was persuaded to give it to Onderstepoort where it stood in the vestibule firstly of the original main building and later in the entrance of the modern complex. In 1973, largely at the instigation of J. C. D. Osler, editor of *The Stellalander* (successor to *The Northern News*), the Municipal Council of Vryburg agreed in principle to commemorate Theiler's work in converting the district into 'the Texas of South Africa' and providing the source of current  
42 prosperity. Steynberg, then the country's foremost living sculptor, generously offered to cast the Onderstepoort bust in bronze at a nominal fee. Public subscriptions were invited and the  
43 Municipal Council contributed R500, eventually being in a position to commission Steynberg (then preoccupied with his massive head of Paul Kruger for erection in the Kruger National  
44 Park). The bust reached Vryburg at the end of 1975 but its mounting was delayed until the completion of a new Civic Centre. It was unveiled in the grounds on the 15th April 1977 by the  
45 Mayor, Councillor Mrs E. H. Saaiman in the presence of Dr Gertrud Theiler during the course of the Vryburg Agricultural Show.

46 The stone platform erected at Armoedsvlakte at Sir Arnold's instigation to commemorate the contribution of the Vryburg farmers to his work on Lamziekte was at one time threatened with demolition; but steps privately taken elicited an assurance from the Department of Agriculture that it would be preserved. The anemometer and commemorative plaque had long since disappeared.

Largely through the efforts of Dr Gertrud Theiler and later of Mr H. M. de Bruyn, official photographer at Onderstepoort, 'The Theiler Memorial Room' was instituted in the Library built by the Empire Marketing Board with which he had been closely associated. It contained various reliquae including his original veterinary diplomas, text books, early instruments,

apparatus, desk, telephone, etc. together with the insignia of his awards, medals and various presentations. Veterinary equipment and numerous photographs of early periods of his career were also collected and displayed.

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47 Upon the death of Sir Arnold, the composure and dignity of Lady Theiler were very notable. 'It was the peaceful painless death which he had always wished for himself', she wrote, 'The blow was for me not unexpected – we were both prepared for it.' She endured the obsequies with calmness and addressed herself to producing some order into the disruption of family plans which resulted. Although Sir Arnold's pension ceased at his death, he had adequately provided for her from investments as sole beneficiary of his will. She had no other intention but to return to South Africa to be with her daughters and, at the height of the summer season, tried to book passage but all ships were packed. After the Microbiological Conference, she joined Max and his family on a 10-day tour of Scotland and upon their return to the U.S.A., spent a month in Switzerland arranging Sir Arnold's and her affairs whilst awaiting passage from Italy.

49 She left Genoa on *Guilio Cesare* on the 17th September 1936, passing Margaret en route for England and the U.S.A. in the *Stirling Castle* and exchanging radio messages. Gertrud met her on the 3rd October and took her to Wellington for a day or two before leaving for Onderstepoort where Lady Theiler remained while Gertrud went each day with P. J. du Toit to the S.A.A.A.S. meeting in Johannesburg. Thereafter she stayed with Gertrud at Wellington, always beschäftigt with the myriad aspects of Sir Arnold's affairs – his records, his books, photographs and friends who wrote continuously. She constantly received reports from the Academie des Sciences Coloniales, the Royal Society of Medicine and many others of resolutions of condolence to her passed with all members standing.

50 Lady Theiler never lost her interest in the scientific fields in which she had been so closely implicated but, living with one or other of her daughters, tended to find increasing pleasure in domesticity both culinary and involving her redoubtable sewing machine. In time the progress of their careers brought both her daughters to Pretoria. She bought a large Victorian house with extensive grounds in the suburb of Riviera where they lived together while she undertook the housekeeping as well as plying her domestic and seamstress skills. Upon their offering to provide help in the light of her advancing age, she indignantly replied – 'Don't you like my cooking?' She was also interested in gardening.

51 On the 21st November 1948, a formal cocktail party was held at Onderstepoort to celebrate the 40th anniversary of its opening and Lady Theiler's 80th birthday. She appeared in a modish black dress and spectacular black hat with her daughters, less glamorously garbed. Gilles de Kock, then Director of Veterinary Research, and Dr A. J. Orenstein suitably saluted both occasions and for long afterwards, Lady Theiler received congratulations from far and wide.

52 She died three years later on the 15th April 1951, having survived numerous family tragedies with calm and gallantry. Her ashes were interred with those of Sir Arnold at the base of his statue at Onderstepoort.

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53 The unhappy Hans led a disturbed and undistinguished life at Onderstepoort. Contrary to his parents' hopes, the health of his wife did not improve under South African conditions and when adrenalin ceased to have effect, she was frequently taken to hospital. She died on the 1st June 1946 and Hans on the 5th August 1947.

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Margaret Theiler retired from her extremely active occupation at the Jeppe High School for Girls in Johannesburg in 1952 but remained a coach, selector, umpire and functionary in the

54 hockey world. She came to Pretoria to live with Gertrud in the family home and occupied herself with coaching games at the Pretoria High School for Girls. The School fêted her on her 50th anniversary as a games mistress in August 1972 when she was 75 but she was still actively at it in shirt and shorts when she turned 80 and thereafter. In 1977, the Johannesburg College of Education awarded her a gold medal for her services to physical education. On the 3rd February 1978, at the age of 82, she was formally inducted at the inaugural ceremony held at the South African Sports Hall of Fame in Pretoria, receiving a medal and commemorative plaque. She was then coaching three times a week.

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Gertrud Theiler pursued her father's infatuation with Science with distinguished dedication and devotion. Short, tough and otherwise 'unorthodox', she exuded a charisma of alertness and vitality. Of the many interests that Sir Arnold cultivated in his children, Gertrud pursued all and in one, attained a level almost equal to his own.

56 When conditions impelled the Huguenot University College to transfer emphasis from Science to other departments, Gertrud left Wellington and in 1939 was occupied at Rhodes University, Graham's Town for a year as Lecturer in Zoology. She then joined the staff at Onderstepoort as a research worker in Entomology, her assignment being ticks, their classification, biology and ecology. For 30 years and more, she contributed a massive series of papers on every aspect of ticks and their parasitological effect on animal life, becoming a recognised world authority and a lauded benefactor of local farmers. Upon reaching retirement age in 1952, she was retained on the 'temporary staff' to continue her work. In 1967, the centenary of her father's birth, she was made an 'honorary guest worker' with her own office and access to laboratories. In 1976, when a senior septuagenarian, she became what she called a 'Morning Glory' – a technical assistant at the chronically short-staffed Onderstepoort, working without pay in the mornings only and contributing the benefits of a phenomenal memory. She celebrated her 80th birthday in 1977, still in close association with her father's Institute.

Dr Gertrud found time to contribute distinguished services to the South African Wild Life Protection and Conservation Association which made her an Honorary Life Member in 1973, and supported germane bodies such as the Austin Roberts Bird Sanctuary. She had of course been early enrolled in the South African Biological Society and became its president in 1947. From the days that Pa taught her as a child to skin and mount birds for museum display, she was committed to joining the South African Ornithological Society. Her catholic interests were expressed in membership of many other learned bodies such as the Africana Society, Archaeological Society, Simon van der Stel Foundation (for the preservation of historic buildings), Museum of Man and Science, Friends of the South African Library and so on.

57 She served on several international commissions in various parts of Africa and on consultative committees locally. After being a Councillor for 16 years, she was elevated to Life Membership of the South African Association for the Advancement of Science in 1945 and also of the National Veld Trust. She was a Corresponding Member of the Société Belge de Médecine Tropicale de Parasitologie et de Mycologie. In 1951, the South African Veterinary Medical Association made her an Honorary Associate. In 1960, she was awarded the senior Scott Medal in the steps of her father and in 1975, in the shadow of his bust in the hall at Onderstepoort, the Elsdon Dew Medal for services to Parasitology was presented to her.

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58 The shock of his father's death profoundly affected Max. Theoretically he was fully prepared he said; but in fact the event stunned him and for some time his mind was dazed. While Lady Theiler 'kept calm and collected and clear-headed', Max became an automaton, remembering

how his father had been 'looking forward to seeing his youngest perform'. On the 29th June 1936, two days after the funeral service, he courageously gave his paper to the grieving Microbiological Conference - 'I am sure my performance was pretty rotten', he wrote his sisters, 59 'as my mind was not in the business at all'. Then he took Lady Theiler to call on Charles te Water who was to receive Pa's Dissertation on his bone work from Alfred and arrange its despatch to its final destination. Lady Theiler was grateful that Max, Lillian and Arnold (as 60 she now called their little boy) 'were all very good to me so that I did not feel lonely'. After a 61 week in London subsequent to the short tour of Scotland the family returned to New York.

The extremely complicated experiments involving mouse-, embryo- and chicken-embryo-brain-spinal cord-tissue were producing a culture showing possibility of immunising against Yellow Fever. Using monkeys, Max, then Director of the Rockefeller Foundation Virus Laboratories and working with an expert team, could show promising results. He could tell the Microbiological Conference that one result of these various cultures called 17D had not killed three experimental monkeys. They survived and subsequently resisted infection from a virulent strain of Yellow Fever. Max was engaged in refining the process early in 1937 when Lady Theiler had taken up residence with Gertrud at Wellington. By March, he proposed extensive trials of its capacity to immunise humans. On the 6th March, Lady Theiler received from him a brutal cable - 'Arnold died hit by auto'. The boy had stepped off the pavement on his way from school and an oncoming car had killed him. Thus ended what his grandfather had proudly called 'the South African branch of the Theiler family'. A daughter Elizabeth was born in 1939 but there were no further additions to Max's family.

62 The process of evolving an attenuated form of the Yellow Fever virus which could safely immunise humans continued. In 1938, Max spent several months in Colombia in South America investigating the effects of the serum which the Rockefeller Foundation was already producing in large quantities and which was progressively refined until it reached maximum efficiency. With Sawyer's support, Max was making habitable and viable large areas of the world previously closed to development. The eyes of the world were on him and the name of Theiler continued to resound.

63 In 1944, Wilbur A. Sawyer retired as Director of the Rockefeller Foundation's International Health Division and in due course, Max was promoted from its Virus Laboratories to his place. The greater responsibilities and wider vision which it entailed were complicated by the growing activities of the new World Health Organisation of the United Nations which rendered redundant much of the Foundation's field. The closure of the Division was therefore planned while Max made a survey in 1950 of South and East Africa with a view to determining a continuing activity for the Foundation. He visited his family and friends in Pretoria and once again enquired whether an appointment in Tropical Medicine might be found for him in the Medical Schools of the University of the Witwatersrand or Pretoria but none offered. His career was evidently cast, not in the land of his birth but the United States. He returned to New York with the proposal that the Foundation concentrate on 'a world-wide study of arthropod-borne diseases in man and domestic animals' and, with the approval of the Trustees, immediately applied its resources to the investigation of this field.

On the 13th November 1951, Max received a cable from Stockholm advising the award on the 18th October of the Nobel Prize in Physiology and Medicine for his discoveries in Yellow Fever and how to combat it. He accepted it in person in Stockholm on the 10th December 1951, hearing in a lengthy citation giving credit to the Rockefeller Foundation and other scientists, that the Nobel Prize Committee had based the award not on originality but service to mankind. He was the first South African to receive a Nobel award and until and after his death, the only local scientist to be thus honoured. His ancestral home in Switzerland duly fêted him in 1955

but when he visited the land of his birth in the same year, there was little manifestation of local pride. Strongly resembling his mother in looks and disposition, Max was reserved and withdrawn. Public plaudits were repugnant to him.

His chosen field converted him into a world traveller of international stature and welcome everywhere. Its immensity and the need to control and keep under surveillance all the work being done in virus diseases conveyed by Arthropods (creatures of jointed legs such as arachnids, crustaceans and myriapods) turned him into a bureaucrat with increasing time at his administrative desk and less in his laboratory and lecture hall. In its time, the Rockefeller Foundation had worthily served its purposes and now bowed out. Yale University offered to continue its work and Max, after 34 years' service, gladly agreed to transfer his entire unit to its Department of Epidemiology and Public Health. He became Professor of Epidemiology under Dr W. G. Downs in July 1964 and upon retirement in 1967, Professor Emeritus, finally supervising his laboratory for two hours a day and, like his father, commencing work on a 'Dissertation' compounding his investigations of 'Arthropod-borne Viruses of Vertebrates'. By 1970, his resources began to fail under the affliction of cancer of the lungs and at the end of 1971, he had a heart attack which considerably weakened him. Another followed in July 1972 and on the 11th August a third proved fatal as he sat comfortably in his armchair watching television. He was 73.

Little cognisance was taken in South Africa of the honour brought by the famous locally-born and educated son of a famous father, both of whom had wrought immeasurable benefices for the world at large. Two years after his death, his widow Lillian and daughter Elizabeth caused a colour Facsimile of his Nobel Award citation to be made. It was presented by his sisters Margaret and Gertrud on their behalf to the Pretoria Boys High School on the 9th August 1974 at a moving ceremony attended by the whole school and distinguished guests. There was no other commemoration of South Africa's first Nobel Prize winner. His widow, Lillian died on the 29th August 1977.

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Alfred Theiler of Lucerne, a Professor of Zoology and Arnold's only brother and virtual agent in Switzerland for almost the whole course of his professional life, concerned himself with the history of the family and wrote an account of their father for a family festival in 1963. He also carefully preserved Arnold's barely-decipherable letters as well as Emma's to his parents and to himself, causing them to be legibly copied and then typed with a view to possible publication. He died on the 15th April 1967, leaving a daughter Klara who never married and a son Alfred 2.

Alfred 2 became a constructional engineer and duly married his first love Elsie Zurcher. They also lived in Lucerne and Alfred continued his father's work in trying to trace all records of his famous uncle. He died on the 28th January 1976, his widow being joined in their home by Klärli, daughter of Arnold's sister, Marie.

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In the northward expansion of Pretoria, the original Daspoort Laboratory, outbuildings and the distant Theiler home were bulldozed, no vestige remaining.

Armoedsvlakte, however, remained very much as it had been in Sir Arnold's time but in due course ceased to be a bacteriological research sub-station and was converted to a Bull Testing Station. His house, laboratory, many buildings and structures, and the towering trees he planted survived.

The Veterinary Research Institute at Onderstepoort never ceased expanding and during the Second World War particularly, became a veritable vaccine factory of the highest importance to the world at large. It was considerably extended with a new administrative block, serum production unit, laboratories and other facilities while the Veterinary Faculty complex across



the road also grew. Its spectacular features such as the great Water Tower and other amenities for whose erection Sir Arnold battled with Treasury, the stables, interior quadrangle, storage lofts, kennels, crematorium and a dozen different structures designed by him, continued unaltered – also the ancient traditions of painting blue the places where animals were stalled and of hanging bunches of eucalyptus leaves to keep off the flies.

64 His successor, P. J. du Toit, trod in all his formal footsteps – Director of Veterinary Research and Services, Dean and Professor of the Veterinary Faculty, president of the S.A.A.A.S., delegate to international conferences, recipient of the Scott and South Africa medals and several honoris causa degrees, mostly local. He was also honoured by several learned bodies including the Royal Society which elected him a Fellow in 1951. He received the Bernard Nocht Medal for Tropical Medicine in 1938 and the Havenga Prize for Science and Art from the Suid-Afrikaanse Akademie vir Wetenskap en Kuns in 1947.

He was an able administrator, tending to allocate tasks to his research staff rather than participating in them as Theiler had done but putting his name to their published works. He thereby acquired more opportunity for diversified interests whereas Theiler's dedication to his avocation was almost total. If du Toit lacked the charisma, drive and inspirational force of his predecessor, he spread his undoubtedly brilliant perception and energies over a far wider field. He served on the Historical Monuments Commission, Public Health Council, Wool Council, Public Service Commission and other disparate bodies (his personal hobby was the collection of South African coins), including the Council for Scientific and Industrial Research. When he retired from Onderstepoort in 1948, he became Deputy-President of the C.S.I.R. and in 1951, President for a year. The range of his interests and mental activities proved too great a strain and he became deranged, dying in Pretoria in 1967.

Du Toit, serving as Director of Veterinary Research and Dean of the Faculty of Veterinary Education 1927–1948, was followed by Gilles de Kock 1948–1949, John Quin 1949–1950 and R. A. Alexander 1950 et seq.

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65 P. R. Viljoen continued as Secretary for Agriculture and Forestry until he reached pensionable age in 1945 when he was appointed Union High Commissioner for Canada at Ottawa. Attaining the age of 60, he retired from the Service in 1949 but was appointed High Commissioner at Canberra in Australia. Indifferent health curtailed his term at the end of 1951 when he finally retired. He died in Pretoria on the 3rd June 1964.

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Joseph Burtt-Davy, the English botanist and agrostologist who first taught Theiler about local grasses, pasturage and toxic plants, remained only shortly on his farm at Vereeniging after his resignation in 1913 from the Union Government Service. After actively continuing his scientific interests, he left for England in 1920 and pursued an academic career at Cambridge University where he did valuable work, particularly in tropical forestry. He died in Birmingham at the age of 70 on the 20th August 1940.

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66 Iltyd Buller Pole Evans C.M.G., M.A., D.Sc., LL.D. (hons), F.L.S. continued his distinguished services to South Africa in an ever-expanding rôle. In 1929 he became Director of the new Division of Plant Industry including Entomology, Horticulture and Field Industry which he served until his retirement in 1939. He had been president of the S.A.A.A.S. in 1920 and received its South Africa Medal in 1922. He was a Fellow of the Royal Society of South Africa. The University of the Witwatersrand conferred an honorary LL.D on him in 1933. His drive and energy in initiating investigations, surveys and botanical publications proved of lasting benefit and a

constant inspiration. Leaving his Irene home with its garden of indigenous plants soon after the death of General Smuts in 1950, he settled at Umtali in Southern Rhodesia where he continued his interests in indigenous vegetation though declining in health and finally unable to walk. He died in his 90th year on the 16th October 1968 and his widow, Mary Thompson, his first mycologist, on the 30th May 1975.

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67 Henry H. Green never returned to South Africa where he had established a brilliant record as a bio-chemist and attained many honours – Scott and South Africa medals, Fellow of the Royal Society of South Africa, etc. Theiler had been his catalyst and continued to inspire him when first appointed to the Bureau of Animal Health at Weybridge where he continued his career after Theiler's death. Lacking inspirational force, he pursued routine activities, distracted by the tragic death of his wife who, slipping on the edge of a pavement, was killed by a passing bus. He died in 1961 at the age of 76.

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68 Green's firebrand friend, John Boyd Orr progressed to great heights in his own field of nutrition and elsewhere. He entered the House of Commons as Member for the Scottish Universities in 1942 and was created Baron Boyd Orr of Brechin in 1949 when he received the Nobel Peace Prize after a distinguished if stormy period as Director-General of the United Nations Food and Agricultural Organisation. He finally retired, bedecked with every kind of honour and in 1966 published an entertaining account of his life 'As I Recall' in which he touched lightly on his association with Theiler whose memory he cherished. In 1970 at the age of 90, he wrote to an enquiring Dr Gertrud – 'He was a man for whom I had a very great respect and for whose friendship I was indebted.' He died the following year.

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69 Dr M. G. A. Henrici, beloved by Theiler for her scientific achievements and her upholding of the Swiss reputation, continued her plant physiological work at Fauresmith in the Orange Free State. Her services statutorily ended in 1948 but were extended on a temporary basis until 1957 when she finally retired. A vital active woman, she then undertook a work (unpublished) on Karroo plants and otherwise occupied herself scientifically. Honoured and appreciated by her own kind, her greatest pride was an illuminated address presented to her in 1968 when she was 76 by the farmers of the Fauresmith district. The University of Basle, her alma mater, conferred an honorary D.Sc. on her in 1969 and in 1971, the South African Association of Botanists made her an Honorary Life Member in tribute. By then she had retired to a home for the aged at Bloemfontein where she died at the age of 79 on the 28th July 1971.

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70 Alexander Edington, the first qualified and officially-appointed bacteriologist in South Africa whose researches into animal diseases were overshadowed by Theiler's later prominence, emerged from distinguished service in East Africa during the First World War with the rank of Lieutenant-Colonel in charge of Grey's Hospital in Pietermaritzburg in Natal. He continued there for four years as Civil Medical Superintendent working energetically for Smuts' South African Party in his free time. Retiring at 60, he suffered a long and serious illness from which he recuperated on a voyage to India as surgeon on a ship transporting Indian labour. He then commenced private practice in Greytown, Natal where he died on the 16th July 1928 at the age of 68. Much mourned by the local populace (Smuts sent a wreath to his funeral), his work as a pioneering bacteriologist has been almost completely forgotten.

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71 Herbert Watkins-Pitchford, Theiler's first veterinary collaborator in South Africa, withdrew to England after his resignation from South African Government service in 1912 and rejoined the British Army. He received the C.M.G. after war services as a Lieutenant-Colonel at the Swathling Remount Depot and Veterinary Hospital and later as Commander of the Army Veterinary School at Aldershot. His unusually versatile talents were devoted upon retirement from the Army to devising and marketing nutritional aids to the cattle industry which he attempted to exploit in South Africa. The venture was unsuccessful but Africa exerted its hold and he decided to settle in Natal where he was well remembered for his veterinary and military services. (His decorations are in the Africana Museum, Johannesburg.)

Fundamentally an unrancorous man, Pitchford had hoped to become Director of Veterinary Research after Union and had bitterly resented the appointment of the 'foreigner' who, he alleged, upon receipt of the records of the four Colonies after unification, had systematically destroyed all his unpublished work. 'My manuscripts, reports, minutes etc. have long ago passed through the destructor. So effectively has my own work been suppressed by Theiler that questions were asked in the House', he wrote in 1928 to Sir Frederick Smith, the veterinary historian. Pitchford's professional ambitions had in fact been thwarted since 1901 when he had applied for appointment as 'Director of the Transvaal Veterinary Department' and the actual post of 'Transvaal Bacteriologist' had gone to Theiler; but his animus had become ethnic. After the First World War, a beautifully-produced little book entitled 'The Past Work of Lieut.-Colonel H. Watkins-Pitchford C.M.G., F.R.V.C.S., F.R.S.E. - being extracts from various Official and Press Sources' was privately printed. It contained among many tributes including General Botha's *douceur* of 1912, Pitchford's claim to the discovery of the serum method of combatting Rinderpest 'and placing it on a working basis'.

Despite its periodic bitterness, he did not allow his animus to fester but addressed himself to the Arts in his old age. Always a facile and somewhat florid writer, he was denied the opportunity of recording his own eventful life by the disappearance from the basement of his house in England of the carefully-padded diaries which he had kept for its whole course. However, he wrote a lengthy novel around his experiences from 1896 to 1900 which was unpublished during his lifetime though another novel 'In God's Good Time' indicating considerable study of early South African history, was published in Pietermaritzburg in 1948. His attention had become largely focussed on history, particularly military, and a previous work 'Lealtad - Loyalty Tales from Spain' dealing with the Peninsular War, had been completed and shelved without thought of publication. His preoccupation with historical study and writing was varied by painting (self-taught) in water-colours the illustrations for his works whose details and authenticity he meticulously checked. The pictures showed considerable competence with an air of 'primitivism'. Thus busily occupied, Pitchford spent his last years on the Natal coast with his family until the 25th June 1951 when he died at the age of 86.

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72 A. J. Orenstein, perhaps closest in knowledge and stature to Theiler and his friend, stated that 'he first entered my orbit in 1910 when I attended an International Demographic Congress in New York composed entirely of scientists. There was universal curiosity (against a background of Tropical Medicine - then Orenstein's forte) as to "what Theiler had been doing". It was at that time novel that he should be investigating the transmission of disease through an intermediary host and not directly.' 'My second exposure to Theiler's exceptional repute', Orenstein continued, 'was in 1913 when I visited the Institute of Tropical Medicine in Hamburg under da Rocher-Lima on whose staff was Gustav Giemsa, famous for his stain. These and others were all talking of Theiler's pioneering work.' When he came to the Transvaal in 1914 to discuss

appointment to a mining group, the image of South Africa in Orenstein's mind was of 'many gold and diamond mines and Arnold Theiler at a Veterinary Institute. The latter, I must say, intrigued me much more than the gold and diamonds.' He went almost immediately to Onderstepoort and the rapport at once established with its Director lasted until Theiler's death.

By the time Orenstein resumed his military career at the outbreak of the Second World War, he had become an international authority on maintaining the health of miners and in combatting the diseases resulting from tissue-destroying dust. His contribution to industrial health was extensive and honoured worldwide. He was still employed by Rand Mines Ltd. in 1954 when he turned 75, long past retiring age; but, finding intolerable a complete withdrawal from his active interests and connections, continued in office until his death. A slight deafness deterred him from the social diversions which he previously pursued; but he remained an exceptionally alert conversationalist with a phenomenal memory and master of his field in which, like Theiler, he constantly 'kept up to date' by study of contemporary scientific journals and discussion.

Major-General A. J. Orenstein C.B., C.B.E., Lt.D.(hon), D.Sc., M.D., M.R.C.S., F.R.C.P., F.R.S.H., etc. died in his sleep in Johannesburg on the 7th July 1972 at the age of 93 when actively engaged in contributing to a biography of his friend. With an address 'Mine Eyes have Seen', he had inaugurated in April 1962 in Johannesburg the Adler Museum of Medical History which in 1969 instituted annual lectures in his honour. In 1972, they became 'The A. J. Orenstein Memorial Lectures' given by distinguished local and overseas scientists.

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73 F. B. Smith C.M.G., architect and builder of the South African Agricultural economy (but unpopular with the farmers because he could seldom leave his office desk to be among them) was recognised at Cambridge and by the Imperial authorities who appointed him to a delegation sent to Australia and New Zealand in 1923 to investigate prospects of land settlement. He became a Fellow of Downing College, Cambridge where, despite advancing age, he promoted Imperial coöperation in agriculture, never losing touch with Sir Arnold Theiler. After Theiler's death, he maintained courteous communication with the family who reciprocated by sending him food parcels in his old age during the Second World War. A bachelor all his life, he had finally retired to Folkstone where he died in 1950 at the age of 86, unremembered and unsung by the country whose land and agricultural industry he had reconstructed and developed.