

CHAPTER TWO

AFRICA SOUTH

IT CANNOT be gainsaid that where there were English in foreign lands, agriculture prospered. In Africa South, they had desperate difficulties.

The British, after earlier temporary occupation, finally took possession of the Cape of Good Hope in 1806. The lovely peninsula with its towering Table Mountain, rich in fascinating flora and small animal life, belied a hostile interior with truculent inhabitants.

As neither the nomad Hottentots (pastoralists) nor Bushmen (hunters) had any concept or intention of serving as labour, the previous administration of the Dutch East India Company had been forced to import slaves of many origins – labourers from Malagasy and West Africa and, most valuable, skilled craftsmen from the Malay States. The possession of slaves became a symbol of status and with it went abhorrence of working with one's own hands. The Hottentots would not work because they were free nomadic men. The immigrant farmers of many nations (of whom Germans and Scandinavians competed in numbers with the Dutch) would not do a hand's turn because, having slaves, it was beneath their dignity. The incipient Afrikaner would direct his labour but he would not work.

In the graceless country that stretched beyond the beguiling Cape Peninsula and environs, some sources of marketable goods had been established. Near at hand were grain- and wine-producing regions but beyond was only cattle country. What cattle! and what country! exclaimed the English observing scrub stock of hugely-horned oxen and leggy goats, stunted horses and comic sheep with enormous tails weighing up to 18 and 20 lbs but devoid of wool and covered only in strong coarse frizzled hair (never shorn) – all being driven seasonally about a huge wilderness conforming more to a desert but still teeming with wild animals.

Much of the domestic stock had derived originally from the Hottentots who in their time, had acquired some lore of cattle diseases caused by poisonous plants and passed it on to the 'Trekboere' then, at the British annexation, approaching the Orange River in the north. The Trekboere, originally forced to trek their beasts to find winter and summer grazing, had later wanted to get away from the corrupt and iron grasp of the Dutch East India Company. Now they had additional need to move. Their modus vivendi made them independent of authority and civilisation. All they needed was a periodic visit to the nearest settlement to buy gunpowder and perhaps a new wagon. Everything else would be brought by the 'smous' or pedlar-trader who would exchange clothing, knives, nails and other manufactured goods for sheep and oxen which he would drive enormous distances back to the markets of the Cape.

1 The Trekboere and indeed their few urban relatives, were impressed by what made things work. If axle-grease facilitated the revolving of wagon wheels and gunpowder made bullets travel and tar had a multiplicity of uses, they must also be powerful in other fields. Accordingly they added to their Hottentot and Kaffir lore of animal diseases a fearsome pharmacopea of all such substances. As late as the twentieth century, gunpowder was prescribed in cattle epidemics and other boererate died hard. On the whole, however, the cattle ranchers in their indolent manner made little effort to combat afflictions in their stock. They would shoot the wild animals that preyed on them but Brandziekte (Scab) and other preventable diseases which ravaged their sheep and oxen were the work of the Lord.

2 Confronted by this outrageous scene as soon as they could get away to visit the hinterland, the first British Governors concentrated on encouraging the formation of agricultural societies in the few centres where more enlightened and mostly English farmers had congregated. Im-

provement of stock was essential for the small existing salt-meat and hides-and-skins trade. Little was accomplished until the appointment of Lord Charles Somerset who arrived in 1814 and immediately took steps to institute a proper agricultural economy. During his 10-year administration (excluding a lengthy absence), he imported thoroughbred merino sheep and (at his own expense) horses which had dramatic effect on Cape animal husbandry.

3 The 'Cape Horse' became a legendary animal. Despite the mysterious 'Horse Sickness' which the earliest travellers had noted, it was possible to rear him in certain conditions. The disease struck in the rainy season and was associated with damp, dew and flies. It was apparently eliminated by frost. Horses could therefore be stabled at night and let out only when the dew had evaporated, or they could be reared in mountainous regions where frost evidently cancelled the causative factor. Prospering by Lord Charles' thoroughbred animals (for which he exacted stud fees), certain Cape farmers took to breeding horses in the high Hantam area about 150 miles north of Cape Town (now the Clanwilliam district). When British authority became irksome, they moved 500 miles northward to the Colesberg district near the Orange River, calling the area the Nu-Hantam, and there they bred splendid horses from further stud importations.

4 Some were raced but most were ridden and showed extraordinary capacity for endurance, requiring only to roll in the sand for refreshment on stages that might extend to as much as 60 or more miles in a single day. 'By 1825', wrote an admiring chronicler, 'the Cape horse was sufficiently attractive to provoke the admiration of the lordly and debilitated Indian Nabobs who at this period flocked in large numbers to the Cape, then highly esteemed as a health resort and many horses were taken to India as hacks and chargers by the recruited health-seekers.' They were ready to pay high prices as the local animal could stand the Indian climate better than English horses.

6 Within ten years, a small trade had developed. The widespread institution of Turf Clubs even in platteland areas further improved breeding. By 1850, it was worth the Indian Government's while to appoint a resident commissioner at the Cape in the person of a retired remount officer, Lieutenant-Colonel Apperley, for the purchase of horses. He stayed for several years, continuously supplying horses and mules to India. 'Several of the Cape horsed cavalry regiments then in India', it was recorded, 'were ordered to Russia during the Crimean War and the Cape horses acquitted themselves admirably in that most trying campaign.' When the Indian Mutiny broke out in 1857, Apperley shipped 5,482 horses and 108 mules, spending a total of £215,645 on their cost, temporary keep and forage. That was money but Apperley was then withdrawn.

7 In 1854/55, the seasonal 'Horse Sickness' had developed into a virulent epizootic killing 64,850 horses valued at £525,000 (more than 40% of the total horse population of the Cape). When the Bishop of Cape Town, Robert Gray and his equestrienne wife Sophy, rode from Cape Town toward the end of 1855 on a visitation of the South Eastern Cape as far as Knysna and Beaufort West, they saw the skeletons of horses all along their route. (In 1869, a similar violent outbreak almost brought their last visitation by cart to a standstill, only 'starving screws' brought down from the mountains being available to replace their own horses.)

9 For this and other reasons, revenue from horse-breeding ceased to be a sizeable item on the Colonial Budget. Gentlemen and the military rode while others went by cart or carriage, using mostly imported hacks (often with docked tails) and carriage horses. In the country, the little Cape horses survived. 'Their speed and endurance are wonderful', the convalescing Lady
10 Lucie Duff Gordon wrote from Caledon in 1861, 'there is no such thing as a cocktail in the country and the waggon teams of wiry little thoroughbreds, half-Arab, look very strange to our eyes, going full tilt. There is a terrible murrain called lung-sickness among horses and oxen here every four or five years but it never touches those that are stabled, however exposed to wet or

mud on the roads'. On the whole, the business of the country continued to be conducted by the ox and its revenue to be fortified by the sheep.

11 Outside the few small towns, possession of cattle marked the stature of every one of every race, particularly among the Kaffirs on the eastern frontier with whom the British Settlers and garrisoning troops futilely contended in a series of Cattle Wars. The animals showed two peculiarities. They bore no allegiance to their Settler owners and Kaffirs coming secretly in the night could mysteriously whistle them away and abscond with them through thick bush. Conversely in the arid wastes of the Karroo, cattle sold by remote Trekboere to traders would develop a homing instinct and trudge back from the driven herd for hundreds of miles through the waterless wilderness to their original owners who delightedly could again sell them.

12 The ox, of doubtful lineage, was the country's mainstay. All transport and conveyance of goods was by ox-wagon and, in emergency, they were ridden in the Hottentot manner. They were tough durable beasts, wilder than the indigenous animals on the veld until domesticated, but by no means immune to disease or poisoning by veld plants. Despite inoculation in their tails (which then frequently dropped off), they suffered widely from Lung Sickness (pleuropneumonia).

13 In sheep, the Cape had its only stable source of revenue. From 1826 when statistics were first kept, there was an adverse trade balance which steadily increased. By 1838 when the prejudice of the conservative ranchers against woolled sheep had diminished and merinos were running throughout the Karroo and in the Eastern Province, Colonial income began slowly to rise through export of wool and the skins of sheep and goats, later aided by ostrich feathers. By 1864, exports (£2,594,594) in the shape of nearly 4,000,000 lbs of wool valued at £1,865,703 and nearly one and a half million skins, a little copper and some ostrich feathers, for the first time exceeded imports (£2,471,339).

14 All seemed set fair and fortune appeared to favour the new woolled-sheep farmers, much as it did in Australia where animal husbandry particularly of sheep and horses, successfully progressed at this time without undue incidence of disease. (Fifty years later, the leading local exponent of veterinary science could state that 'in the early days of colonisation, Australia was no country for the veterinary surgeon'. Farmers combatted their incidental difficulties as best they knew.) The Cape was fortunate too in the arrival of lay and professional Englishmen who, fascinated on sight by the capricious Colony, remained to confer on it all the benefits of their wisdom and affection.

15 Remarkable among them was 'a farmer's son' from Bristol, J. B. Hellier who was 45 (then considered senescent) when he reached Graham's Town in the Eastern Province in 1864. Born to the land and familiar with its sophisticated procedures in the use of artificial fertilisers, oil-cake feed for cattle and specialised treatment of sheep, Hellier might have been considered an agricultural expert had he had professional training. His knowledge however was founded in devoted interest and affection for the land, both of which he immediately applied to his new home. A ready writer, he contributed sound common sense articles on agriculture to the very limited local newspapers and in 1868, launched *The Farm*, the first agricultural weekly in the Colony. His was the first instructed advice available to its farmers.

16 Labouring in another field was Peter MacOwan of Yorkshire who, trained in chemistry, emigrated to the Eastern Province in 1862 and was captivated by its botanical richness. Moving from Graham's Town to Somerset East in 1869, he served as science master at Gill College and continued his studies of South African plants, on occasion with special reference to their use in agriculture. Many men, likewise captivated down the centuries, had devoted themselves to systematic South African botany but MacOwan applied his local botanical knowledge to agricultural use.

The Cape of course was far in advance of every other part of Africa South, having attracted a miscellaneous-gifted population from 1652 onward. Two centuries later, it could claim men of talent and maturity in public affairs which were conducted with vision and sophistication deriving directly from Europe even if, for various reasons, there was not always administrative efficiency. Much the same could be said for the more recently settled Natal where English agriculturalists struggled with a sub-tropical climate and strange diseases in rearing sheep, horses and cattle in the only manner they knew. Protected by British forces from possible incursion by the restive Zulus, they also had the advantage of Army veterinary officers who knew more about horses than sheep, then Natal's most important product.

In general it might be said that the further north from Cape Town, the less agriculture. The vast wastes of the Karroo with their huge ranches running merino sheep and crossbred cattle with a few horses in the highlands extended across the Orange River into what had become in 1854 the Orange Free State. Although the management of affairs long continued in the hands of English-speaking men, agriculture was mostly the pursuit of 'Boers' who, in the long trek northward from 1836 onwards, had dallied in what appeared a promising land. Cattle-raising and horse-breeding were principally their occupation and they pursued it with the unassailable bucolic lore of their forebears and a certain local suspicion of poisonous plants. In human and animal health, little could disturb their faith in 'boererate'. Like their Cape Colony counterparts, they tended to despise manual labour and to rely on service from Bushmen, captured earlier as children, Griquas and impoverished Hottentots.

Further north, across the Vaal River, the South African Republic pursued a comic-opera existence first under a true Voortrekker Marthinus Wessels Pretorius and then under a Cape clergyman, President Burgers. The outstanding characteristic of the Afrikaner – his capacity to hate and oppose – was woefully evident. The Transvaal Boers fought the neighbouring natives, seizing their cattle, appropriating their lands and capturing their youngest children to train as servants (especially outraging David Livingstone as he skirted the 'Magaliesberg Boers' on his way to the north) and they fought with their brothers across the Vaal in the Orange Free State. Then they fought among themselves, brother against brother, in a lamentable little civil war in 1863/4. They were stiff-necked and passionate and by no means susceptible to reason. They could oppose and hate for untold generations.

There was much to harden their characters. The Transvaal was a wildly variegated country, changing suddenly from the bare and inhospitable Highveld in the south to a lower sub-tropical region, rich in water, vegetation, animal life and diseases. There were also real fighting natives in the north and west – fugitive Zulus led by Moselikatze from Chaka's murderous rule, and strange tribes living in the mountainous regions south of the Limpopo and extending into territory which the Portuguese had tenuously held for centuries. Beguiled by their lush and well-watered lands where fruit, vegetables and pasture flourished, the Transvaal Boers nonetheless were forced to maintain the commando system. It was useful anyhow to replenish their stock occasionally from native cattle.

All was not as idyllic as it seemed. Some of the lovely country, rich in grazing, was verboten territory because of 'fly'. In the fifties, Livingstone had startled the scientific world with his account of the tsetse fly in his 'Missionary Travels' (translated into many languages). They were lethal to cattle during the day and whole civilisations seemed to have perished in Transvaal areas. In later years, archaeological investigations revealed the habitations of highly-developed metal-working Bantu communities apparently abandoned in confrontation with some terrible non-visible enemy, possibly the tsetse fly moving south. When the Boers settled there, they kept outside the fly areas, tantalised by the excellent grazing within them. They could move their cattle across them at night at certain places, discovered by early travellers and trekkers; but

whole areas of delectable land were closed. On some of them stood gaunt ruins where their predecessors had foolhardily founded villages.

20 Marvellous though the agricultural possibilities of the Transvaal were, there was no point in cultivating them. There were no markets. Even if there had been, the perishables which flourished so splendidly – fruit and vegetables, dairy products, chickens and eggs, citrus and products of the Boer cuisine – would never survive the long hot journeys by ox-wagon. Agriculture was therefore confined to local vegetable patches for household use and animal husbandry, notably cattle, sheep and a little breeding of horses obtained from the Free State. All suffered from the old enemies of Lung Sickness, Blue Tongue and Horse Sickness. The only safe product was tobacco which grew phenomenally in the Magaliesberg.

21 It was to the credit of the emotionally-charged Transvaal Volksraad that on the 11th May 1870, it passed a law for the Suppression of Lung Sickness. It did nothing more than impose heavy fines on anyone allowing infected animals to infect others or failing to quarantine them in kraals and to advise neighbours; but at least it exhibited the State's intention to control disease.

22 Already in the Transvaal, attracted by its trading, transport-riding and other possibilities were men from Europe prepared to take a hand in its development. Notable among them was Hendrik Wilhelm Struben, born in Germany and subsequently a Dutch naval officer, who became State Attorney of the Transvaal in 1867 and whose sons worked and fought for their new land. There were many Hollanders such as B. C. E. Proes who, as Government Secretary, signed the Lung Sickness Act, and a large number of Germans including the Jeppe family of Rostock. The first to arrive in the sixties was Hermann a doctor who was shortly impressed into Government service as Postmaster General. He was followed in 1861 by his brother Friedrich (Fred), printer, publisher and cartographer who was also impressed as Postmaster General but, after numerous other occupations, devoted himself to publishing and the production of excellent maps including in 1877 a much-consulted map of the Transvaal clearly indicating the 'fly-line' or boundary of tsetse infestation. A third brother Julius arrived in 1870 and was made Postmaster of Pretoria before embarking on a commercial career. His two sons, Carl and Julius, impressively influenced the history of their new country.

23 In its lack of competent officials, the South African Republican Government gladly employed men of every nationality including English. Pretoria, its capital, strongly resembled a European village, being early distinguished by its oak trees and roses. Moving on its periphery in the guise of traders, transport riders, cattle dealers, speculators, remittance men and mere adventurers, was an equally cosmopolitan importation due as much to chance as design. Singular among them was Alois Nellmapius born in Buda-Pesth in Austro-Hungary but educated as a civil engineer in Holland. Voyaging vaguely to South Africa in 1872 (in the ship *Nathan* in a cabin shared with the rising Cape politician John X. Merriman who helped him to learn English), he met a group of Hollanders when his ship called at Portuguese East Africa and was persuaded by them that the hinterland offered opportunity. Nellmapius disembarked and plunged into sub-tropical Africa with the enthusiasm of the European that so vastly exceeded the Boers'. In his short lifespan, his activities significantly affected the whole sub-continent.

24 Africa South now sustained a convulsion tantamount to a severe earthquake. The diamonds sporadically found in small numbers in the Northern Cape were suddenly discovered in profusion on the banks of the Vaal River and inland. Hundreds of local inhabitants immediately streamed to the site from the Cape, Free State, Natal and Transvaal for a brief interregnum before hundreds more arrived from overseas, particularly goldminers from Australia, America and Canada. In place of the previously prevailing depression, there was now an insatiable demand for everything, raw or manufactured. It was alleged that the area north of what became

**AREA INFESTED BY TSETSE FLIES
SOUTHERN AFRICA**
after a map by Fred Jeppe, 1877



25 the town of Kimberley was denuded of trees and any bush large enough to serve as firewood, as far as the Congo – a despoliation from which the wilderness never recovered. The appetite of the steam-engines to haul and crush the blue ground containing the diamonds, became voracious and £30 was a common price for a wagonload of firewood.

Anything could be sold – food in any form, draught animals, timber, imported manufactured goods of any kind and the services of anyone who presented themselves for employment – many adventurers found themselves Town Clerks and secretaries of hospitals and even magistrates. The economies of the struggling republican and colonial territories began to improve, particularly at the Cape. When payable gold was found in the Eastern Transvaal some three years later, the adventurers and orthodox miners surged into that beautiful but precipitous area, riddled with fever, and gave hope of improving the chaotic financial affairs of the South African Republic, now under the presidency of the Reverend Thomas Francois Burgers.

26 The new ‘goldfields’ (so far from being ‘fields’, they occurred at all angles in some of the sharpest mountains in Southern Africa) presented daunting problems. They were in the realm of the ‘fly’ and animal transport, apart from ‘salted’ or supposedly-immunised oxen, was vitually impossible. Furthermore there were no routes or tracks, much less roads. The nearest port was at Delagoa Bay in Portuguese East Africa. In 1873, Alois Nellmapius obtained from the Transvaal Volksraad a concession for transport from the coast and employed his training as a civil engineer to build the ‘Nellmapiuspad’ to Delagoa Bay. He also bought land for farms and trafficked in gold and was on his way to success and status.

27 The gold-diggers never overcame the ‘fly’ – tsetse or mosquito, A decade later, while Pilgrim’s Rest still served as their centre, ‘it was a common thing to see a string of practically naked native women carrying cases of gin, whisky or brandy on their heads, marching hundreds of miles from the Portuguese seaport and competing successfully with ox-wagon transport. They sang as they marched; and they marched by sun and stars through the valleys and over the mountains where the snake, the lion and the leopard reigned, across rivers infested with crocodiles, delivering the goods to the white “Umlungu”; and they were well content with the reward of a sovereign for the perilous journey. When the boys emptied the bottles, they scanned the horizon eagerly for more Kaffir maids with more drink.’ Thus W. P. Taylor, one of the many diamond pioneers who took a look at alluvial gold. In the end, the gold ran out and the flies reigned supreme. Before that happened, Nellmapius had made a great deal of money in trading, land and gold but, together with the Transvaal Republic, endured hard times for some years before a state of economic stability was reached.

At the Cape, despite persistent drought and a prevailing depression which took long to lift, the additional and rising revenue from diamonds and the by no means negligible contribution of ostrich feathers, maintained the favourable trade balance which sheep and their products had achieved in 1864. The value of exports exceeded imports until 1875.

28 By 1872, the export of wool had reached a record value of £3,275,150 contributing to a total export value of £6,069,529 as against £4,388,728 in imports. Thence onward it declined and by 1875, despite the now massive contribution of diamonds (£1,548,634), exports only fractionally exceeded imports. It needed no statistician to divine that something was fundamentally wrong with the country’s economy. Industrial activity and mineral wealth could not compensate for diminished agricultural productivity.

29 It was in fact common cause that sheep farming had become so hazardous through the incidence of numerous diseases that many farmers had abandoned them for cattle. In 1865, there had been 693,514 cattle in white possession in the Cape Colony but in 1875, there were 1,111,713, an increase of 419,199. Productivity was moving from the more profitable to the less. In the years between 1865 and 1875, the sheep population had diminished from 1,995,445 to 1,345,883

or a reduction of 649,562. There was every reason to suppose that the trend would continue and basic revenue decrease.

In charge of the Cape Colony at the time were two Englishmen singularly appropriate to a critical economic situation and to the decision necessary to resolve it. The course of action they instigated ultimately changed the face of Africa South and, to a considerable extent, of the world at large.

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30 Sir Henry Barkly, Governor of the Cape Colony had had wide colonial experience, tropically in Mauritius and Guiana where he had owned sugar plantations, and agriculturally in Australia whose problems were in many respects similar to those of South Africa. He was in addition a man of wide interests with a particular fondness and knowledge of Botany. While in office at Cape Town, he collected and cultivated rare indigenous plants, sending specimens to Kew and urging magistrates and other colonial servants throughout his domain as well as amateur enthusiasts, to keep him supplied. The political convulsions of his unruly charge (largely originating in the turbulent Diamond Fields) caused him to travel extensively through the vast Colony and his knowledge of its 'agriculture' was anything but academic. He was also a congenial and approachable man sincerely devoted to finding a *via media* between the hot-tempered and intransigent local politicians who opposed each other in the two newly-constituted chambers of Responsible Government.

31 The chief promoter of this step toward political maturity and its first Prime Minister (1872) was John Charles Molteno of London (resident for generations in England, the family's Italian name had long ceased to have significance). Adversity sent him at the age of 17 with only rudimentary education to Cape Town where, at first variously employed, he founded in 1837 his own trading company. Molteno & Co. was an importing/exporting firm, mostly concerned with the wine trade which at that time provided the Cape's most acceptable product. John, an astute observer and industrious exploiter of opportunity, had however no confidence in the stability of viticulture and when he had accumulated sufficient capital, bought in 1840 about 100,000 acres of the desolate Karroo north of Beaufort West around Nelspoort for division into several sheep runs and the production of wool from merinos. On each of these 'farms', he placed an English cousin as manager and in 1844, himself took up residence upon one, devoting himself to the development of agricultural industry.

Beaufort West was one of the most curious of the Cape's first districts. Of vast extent originally, it had been very sparsely populated by trekboers of miscellaneous origin. The dorp itself had been founded on the farm of a coloured man, de Clercq but owed its development largely to Englishmen. The 1820 British Settlers in the Eastern Province had come to grief through a succession of disasters – floods, droughts and continuous infestation of their grain crops by the fungus known as 'rust'. Although legally bound to remain on their locations, a great diaspora of English through Southern Africa in fact took place. Trained in many crafts and trades as well as being naturally resourceful, they helped to found and administer many of the first dorps in the Karroo. They also bravely resumed 'farming' under totally alien conditions and endowed their sheep runs with characteristic names. Enduring in the Beaufort West district among the usual Paardefontein, Welgevonden, De Hoop, etc. are Little England, La-de-Da and other fancies of John Molteno's farming colleagues who in later years, were driven out by drought and took their talents to the diamond and gold fields.

Molteno worked hard to develop the wool trade on his vast estate, learning all the hazards of the sheep farmers and coöperating closely with his Afrikaner colleagues. He proved its success

and by 1851 when he went to England, it had reached an export value of just under a million pounds sterling. On his return, he formed a new export/import company, P. J. Alport & Co. whose variegated goods greatly diverted the local yokels in the dorp. Rich, influential and highly progressive, he was elected by Beaufort West to the Legislative Assembly of the newly-granted Representative Government and thence onward, campaigned for full Responsible Government against its many bitter and tenacious opponents. He was continually defeated but when Sir Henry Barkly, instructed by the Colonial Office to expedite a locally responsible regime, arrived in 1870, Molteno's policy finally prevailed over many widespread recalcitrants. In 1872, 'the Lion of Beaufort' was invited to form the first government. By then, in addition to their official coöperation, he and Barkly had become close friends. It was the record year for merinos, wool producing an export value of £3,275,150. It was also the last financially happy year for Barkly and Molteno.

32 A practical wool-grower himself with exceptional knowledge of the vagaries and afflictions of sheep, the new Prime Minister knew that the cattle population on which the economy of the Cape was based, needed attention superior to Hottentot specifics and boererate. Natal, facing a similar onslaught of diseases and diminishing returns, was drawn to the same conclusion and in 1873 appointed a commission to investigate Redwater in cattle, then rampant. A year later, the Colony imported Samuel Wiltshire of Gloucester, then aged 30 and recently qualified at the Royal Veterinary College, London and on the 28th October 1874, appointed him to 'the office of Colonial Veterinary Surgeon and Inspector of Cattle at Port Natal' at a salary of £400 per annum and permission to practise privately. The first incumbent of such a position in Africa South, Wiltshire with nothing behind him by way of office, staff, research facilities or indeed coöperation, had an impossible task but zealously did what he could.

33
34 Molteno thought in other terms. He had a far vaster territory to administer, varying widely in conditions of climate, rainfall, fertility and accessibility. The main areas of animal productivity, particularly sheep, lay in the Eastern Province and the Karroo; but development everywhere was being impeded by disease. Other weighty matters were on his mind, notably the British Government's bumbling attempts to force federation on all the States of Southern Africa; but, in concert with Sir Henry Barkly, he proposed the appointment of a Stock Diseases Commission fully to investigate the situation with professional as well as expert lay advice. Then he went to England and while there, secured the services on a three-year contract basis of Professor William Catton Branford, Professor of Veterinary Medicine and Surgery at the Royal Veterinary College in Edinburgh. During his absence, Sir Henry formally appointed the Commission on the 17th August 1876. Its members consisted of a cunning selection of English and Afrikaner farmers from all parts of the Colony and J. B. Hellier, now widely accepted as an agricultural expert (his journal *The Farm* had failed through large numbers of the subscribers rushing to the Diamond Fields).

Catton Branford duly arrived from England to join the Commission and on the 6th October 1876, eight good men and true set out on a tour of the Eastern Province to investigate sheep farming and cattle diseases. Their sole authoritative advice was MacOwan's notes on the toxicity of various plants.

Their Report, drawn up by Hellier and much informed by local surmise, was a dismaying document. Even the ostriches which providentially had produced such spectacular profits in areas vacated by sheep, were now dying 'from internal parasites of the tapeworm tribe'. Innumerable other 'parasites' caused a host of mysterious diseases; but Gall Sickness, the Commission stated roundly, was caused by indigestion which could be cured, they had been told locally, either by one quart of an infusion from the Gall-bush, or one pint of linseed oil mixed with one wine-glassful of turpentine. The pharmacopea of overseas veterinary science seemed

surprisingly limited or perhaps unknown nor could anyone tell whether it would be effective with the mysterious 'parasitic' diseases.

The Commission ascribed them to over-grazing and the sheep 'having eaten out all the salines and bitter herbs'. Ticks and worms caused other diseases and damp was the cause of Liver-fluke in sheep. On known ground such as Glanders in horses (very prevalent in Europe) and Lung Sickness in cattle, slaughtering was forthrightly recommended and long quarantine for recovered cases to prevent infection. On the notoriously mysterious ground of Horse Sickness, the Commission flatly consigned the problem to Professor Branford.

There was in fact very little that in the general circumstance of ignorance it could report beyond disapproval of over-grazing, soil erosion and grass-burning. It emphasised the necessity of fencing, especially in preventing the loss of stock 'in the event of a native outbreak' (and sure enough, the 'Ninth Kaffir War' broke out less than a year later). The whole significance of the Commission's Report lay in its recommendation that two duly qualified Veterinary Surgeons be appointed as Stock Inspectors (presumably to prevent the spread of infectious diseases) in the Eastern and Western Provinces of the Cape Colony.

Moltano immediately applied for financial authority amounting to £1,000 to establish a Veterinary Department and to pay for the recommended assistants. His Government granted it and Branford was charged with selecting the staff of whom he hoped to be appointed Director when he had completed his assignment.

The field was now open to Catton Branford who, as far as is known, had never previously left England and was accordingly abashed by a harsh and hostile country inhabited by a hydra-headed monster of disease. Enjoying for his three-year period the title of 'Colonial Veterinary Surgeon', his first task was to tour the western and northern Cape Colony as far as Prieska but blood poisoning put him in hospital at Port Elizabeth and the verbosity of his 1877 Report hardly conceals his confusion and incapacity in an alien land. He had even considered asking to be relieved of his engagement.

In November 1877, he had travelled through Beaufort West as far as Graaff Reinet, finding little sheep disease. An urgent call from Victoria West to deal with the ancient 'Vomeerziekte' found him convalescent at the coast. He accordingly issued a questionnaire through the magistrate to the district's farmers who had for centuries believed that this lethal vomiting disease was due to young grass or the 'vomeerbos' on which the sheep grazed. He asked inter alia what 'remedial measures' had been adopted and with what result. One group of farmers (English and Dutch) listed 'tar water; gunpowder and vinegar; one ounce of common salt with water to dissolve it; epsom salts; croton oil in two to six drops; sulphur, salt and meal mixed with water; castor oil; sweet or salad oil. Results: hard to say - some recovered.'

In his 1878 Report, Branford recorded the gratitude of many farmers for the appointment of the Commission and the circulation of its Report. Some of its recommendations, notably in dipping sheep for Scab in the many preparations available (as well as tobacco solution), were being followed. In his last year, he returned to the Eastern Province whose whole wool-producing region had been denuded of sheep owing to disease. A fierce drought had ensued and then the Kaffir War (an historic sequence for the whole course of the century). In the unsettled state of the country, Moltano had told Branford that the appointment of veterinary officers would have to be deferred and he had better get on with his investigations. The situation had then deteriorated sharply.

Moltano had objected to the intention of the new Governor Sir Bartle Frere of employing Imperial troops in an affair requiring only police action and, as head of a virtually autonomous Colony, had sent Colonial forces to the affected area. Frere dismissed him and his able Commissioner for Crown Lands and Public Works, John X. Merriman, and reconstituted the Go-

36 vernment under Gordon Sprigg. For a short time, Molteno agreed to act in it as Colonial Secretary; but, out of sympathy with Frere's policy and acutely conscious of his demotion to a powerless bureaucrat, he resigned his seat at the end of 1878 and temporarily retired from public life. The Sprigg Government withdrew from its Estimates the £1,000 previously voted to initiate veterinary services.

37 There was now no future for Branford who had expected to inaugurate a department and instruct its assistants in the investigation of disease. He accordingly returned to England at the termination of his three-year contract in 1879. (A year later he was convicted on a charge of fraud and, having served a prison sentence and been struck from the register, practised as a veterinary surgeon. Finding after ten years that his conviction was prejudicing his livelihood, he appealed against it and was acquitted.)

38 The Government, however, continued to make use of J. B. Hellier who had industriously served on the Stock Diseases Commission and after. In 1879, he was appointed Superintendent of Immigrants for the benefit of farmers arriving at the Cape under a Government-aided scheme to improve agricultural economy by allotting land in the Eastern Province to qualified candidates. Hellier revelled in the work for which he was singularly equipped, taking his charges to their locations and remaining their guide and friend long after they were established. His appointment officially terminated in 1884 but he continued an active force in the farming field.

Molteno's progressive move, aided by Barkly, toward salvaging the agricultural economy only briefly lost momentum. Due to the drought and the wasting Gaika-Gcaleka War, the situation was accentuated. Real devastation faced the eastern districts. The Cape Government, still containing men who had approved Molteno's move and the voting of funds, was forced immediately to proceed along the lines that had emerged and caused steps to be taken in England to find a suitable Colonial Veterinary Surgeon. The search ended on the 22nd March 1880 when Duncan Hutcheon M.R.C.V.S. was appointed in London at a salary of £700 a year. He arrived in Cape Town on the 22nd April and was immediately posted to Port Elizabeth, focal point of the most seriously affected area, and without any foreknowledge or assistance, engaged the massed force of animal diseases.

* * *

Duncan Hutcheon was a prime sample of Scotland's continuous and best export to Africa South during its long period of evolution. Scotsmen (including Livingstone) revealed the interior, brought the first civilisation in the shape of missions, engineered the roads and railways, designed, produced the bricks and constructed the buildings, and generally provided professional and technical services in almost every field. Hutcheon provided such pioneer service in the field of veterinary science.

39 He was born near Peterhead in 1842 and spent his boyhood in the household of a Calvinistic uncle, being well-schooled in Biblical knowledge and religious song and ritual. Scholarly by nature, he read widely with a strong inclination toward literary (as opposed to scientific) work. His favourite sources were the Bible, Thomas Huxley and Herbert Spencer. He had none of the inhibition of the devout student and was gregarious and out-going, being as ready to sing a Scots song or tell a joke in a broad accent in consorting congenially with his fellow men as to quote the Scriptures to solemn farmers.

Passing through the parish school at Old Meldrum and taking some classes at Mollison's Academy at Aberdeen as well as studying at night school, Hutcheon then obtained employment on a farm and began his career with a close study of animals and agricultural methods. He was

on the land when the great epizootic of Rinderpest struck the British Isles and witnessed the wholesale slaughtering of cattle in an attempt to stop it. Though there is no written record, it is possible that his deeply-stirring experience to which he often later referred, impelled him to the next step in his career.

In 1868 at the comparatively advanced age of 26, he enrolled at the Royal Veterinary College in Edinburgh and, gaining a bursary after the first term, completed the three-year course with exceptional distinction. He was awarded the silver medal for Anatomy, Physiology, Chemistry, Materia Medica and Hippopathology as well as other prizes. Man of the land though he were, Hutcheon had rejoiced in the unseen world revealed by his microscope and was never without it thereafter.

A fully-qualified veterinary surgeon entitled to add M.R.C.V.S. to his name, Hutcheon was first employed in private practice, mostly in partnerships, in Scotland, Ireland and England where in 1875, he was appointed to the Liverpool (Horse) Omnibus and Tramway Co., having hundreds of horses in his care. Here he gained a close knowledge of Glanders, Farcy, Strangles and numerous other equine diseases. He was 38 years old when the agent for the Cape Government secured his services – a fine figure of a man with a good head of hair, a heavy moustache and clear candid eyes which disarmed his critics. His bearing was impressive but his manner engaging. He got on with everybody and shirked nothing.

40 Hutcheon was given one room in Port Elizabeth from which to combat all the country's stock diseases, with particular reference to sheep and to Lung Sickness in cattle, then endemic in the area. Within weeks of his arrival, he was shown cases of Lamziekte at Bredasdorp for the first time in July 1880. His debut in a pronouncedly sceptical context was felicitous. Hardly a year in a totally foreign milieu which meant virtually relearning his profession, he was confronted by a disastrous epidemic of Pleuro-pneumonia in the Angora goats which brought wealth to the Cape Midlands. He had the manner and the authority to institute widespread inoculation and strict quarantine. The epidemic was quelled without much loss and the joy of the Angora breeders was expressed in a gold watch and chain, a gold cup and, with rare discernment, a binocular microscope. The Government presented him with a special bonus and he was publicly thanked in Parliament. Better, the newly-created Divisional Council of a little dorp in the arid 41 Noorsveld, Jansenville, resolved in August 1882 'to request the Government Veterinary Surgeon to attend certain farms in the district for the purpose of attending to some goats now suffering from a disease called Nenta and urge that he arrive as soon as possible as, during certain months of the year, it is prevalent.' Hutcheon had succeeded in hostile circumstances in being not only accepted but wanted. He was to be haunted by Nenta for many a long year.

While the Cape was left in comparative peace after the Gaika-Gcaleka War, momentous events had occurred elsewhere. President Burgers had proved inadequate to uniting the burghers in the Transvaal and to disciplining menacing native tribes in the north. The South African Republic had drifted into chaos and bankruptcy while the Zulu chief Cetewayo massed warriors on its border preparatory to attack. Many responsible burghers including Stephanus Johannes Paulus Kruger desired British protection against onslaught by the Zulus or appropriation by one or other of the powers scrambling for Africa. In April 1877, the British had quietly annexed the Transvaal and its numerous English inhabitants rejoiced.

42 The British caught a Tartar. Cetewayo refused to disband his massive Zulu forces on the Transvaal border and had to be brought to heel; but the rôles were reversed. Samuel Wiltshire, already knowledgeable about the peculiar animal afflictions of Natal, joined the military campaign but escaped the massacre of the British forces at Isandhlwana. Finally they prevailed at Ulundi and went on to deal with Sekukuni in the Northern Transvaal whose roving warriors were terrorising the inhabitants of the declining gold diggings. The regimental veterinary sur-

geons, particularly charged with maintaining an efficient cavalry force in a mist-enshrouded area, now met Horse Sickness at its worst. All they had was 'a small pamphlet issued under the authority of Lord Chelmsford (C.-in-C.) and the annual report of the Colonial Veterinary Surgeon (Wiltshire)'. If these documents described the disease, they were quite unhelpful in prescribing for it.

43 Confronted by increasing numbers of cavalry horses healthy at night and dead in the morning with foam-flecked nostrils, Sergeant-Major R. W. Jackson and Veterinary Surgeon R. Moore of the King's Dragoon Guards decided that it might be useful to record their observations during the Sekukuni campaign from October to December 1879. Limited and perforce speculative, it was at least a professional record. Fred Jeppe published it in his Transvaal Book Almanac for 1881. Something would have to be done about Horse Sickness if development was to proceed in the whole of Africa South.

44 Private veterinary surgeons had begun to arrive. Similarly with Australia where professional 'horse doctors' (and some charlatans) emigrated to the gold diggings in the fifties and sixties and then drifted to the few towns, veterinary surgeons were attracted to the Cape diamond fields and the early gold diggings in the Eastern Transvaal. 'In 1880', the Australian doyen recorded, 'there were only seven or eight qualified veterinary surgeons in Victoria, four of whom were in Melbourne and about the same number in New South Wales, most in Sydney. There were three in Adelaide, one in Brisbane, none in Western Australia, one in Tasmania and three in New Zealand'. With a much smaller white population and very uneven development, Africa South in 1880 was moving very slowly in the same direction. John Cammack M.R.C.V.S. who began his studies in London but qualified in Edinburgh in 1872, came to the Diamond Fields in 1878, progressing later to the Transvaal. A vociferous man, he readily wrote to newspapers and also communicated his observations to Hutcheon. In about 1886, an apparently unqualified man, George Charles Baker, tried to establish a practice in the Transvaal and in 1890, Mr Sam Howard M.R.C.V.S. put up his plate in Port Elizabeth. None succeeded in earning a living. Unqualified 'horse doctors' and numerous 'veterinary farriers' were to be found in the few large towns but merely added their surmises to the lore of local wiseacres.

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47 What was needed and periodically proclaimed by both the experienced and the scientifically-educated gentlemen at the Cape was a proper scientific approach to the whole problem of agricultural economy. The renowned Professor P. D. Hahn had been appointed to the chair of chemistry at the South African College (later the University of the Cape of Good Hope) but perforce spent all his time teaching. There could be no chemical analysis of soils. The farmers had their own groundless store of intuitive lore. They knew the peculiarities of brak or saline soil and of occasional characteristic mounds as much as 20 or more yards across, on their properties which were more fertile than the surrounding land - formed by ants or beetles or other insects, they said but no one knew authoritatively or why they should be exceptionally fertile. In 1881, MacOwan had become Professor of Botany and managed to produce a valuable brochure, printed in 1887, on 'Plants that furnish Stock Food at the Cape' which also dealt with toxic plants. But there were no laboratories, no research institutes, no organised attacks on the ecological problems which steadily grew more serious in Africa South.

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50 Hutcheon, a host in himself and still stationed on the eastern seaboard, was flung from one crisis to another while opening Agricultural Shows, judging exhibits, travelling incessantly and engagingly wooing the farmers with Scottish jokes and Biblical quotations to match their Calvinistic allies. He identified and described the historic Blaauwtong (Blue Tongue in sheep) and investigated Redwater in cattle. He also came to grips with Lamziekte and exchanged technical observations with Cammack in Kimberley and with sundry lay observers. Visiting Griqualand West in 1884, he had satisfied himself that both Lamziekte and Stijfziekte (Stiff

Sickness) were due to defective nutrition and had stated in his Annual Report that the causative
51 shortage of phosphates could be compensated by feeding crushed bones and cereals. His re-
52 ward was to be ridiculed by his superiors.

53 He had no journal to which to communicate his findings nor any official colleague with whom
to discuss them. He could publish articles in the local *Racing Calendar* on the proper method of
shoeing horses and suchlike, and on miscellaneous subjects in the daily newspapers; but when
it came to combatting an outbreak of Redwater in 1883–84, he had no ancillary services to help
him.

54 Relying as much on his microscope as his postmortem and other observations, Hutcheon knew
that what he most needed was a bacteriologist. It was impossible, he said, to arrive at ori-
ginating causes of diseases without one – ‘In very few, if any, can we lay the finger on the specific
organism’. He confided his need to Merriman, then Commissioner for Lands, when both were
in Graham’s Town in 1884; but even that energetic innovator was unable to meet it. Hutcheon
officially made his request in writing; Merriman promoted it as long as he was in office; the
Imperial Government, aghast at its losses in money through Horse Sickness, announced its
willingness to subsidise an appointment; the proposal was bandied from Minister to Minister
and no progress was made. Every year hundreds of animals died from Horse Sickness and in
some years, thousands in every territory of Africa South. With all his special knowledge of
hippopathology but with no resources to support him, Hutcheon could do nothing.

55 The British Army could and did do something. Their losses in horses and mules, particularly
in Natal where numerous mounted regiments were quartered, had reached a height that demand-
ed action. Regimental veterinary surgeons had reported continuously to their superiors in
England but were baffled by the disease. The Army sent out its best man for the purpose –
Joshua A. Nunn F.R.C.V.S. of the Royal Artillery (later principal of the Punjab Veterinary
College) who had specially studied horse diseases in the north western districts of India. To make
assurance doubly sure, the Army first sent Nunn to Professor Brown’s Bacteriological Institute
in London and then to Pasteur in Paris. He was further furnished with laboratory apparatus
and sent on his way in December 1886, arriving in Pietermaritzburg in Natal on the 5th January
1887.

With his modern microscopes and slide equipment, Nunn hoped to be able to isolate the
operative ‘germ’ or ‘microbe’ as Pasteur had done with Anthrax and, by injecting it in weakened
form, to obtain a serum that would immunise horses. The microbe or ‘bacillus’ as it was now
called, which he thought he had found, looked like Anthrax but refused to behave in its dis-
tinctive manner. After a year, Nunn reported accordingly and was ordered by the Army to re-
main another year which produced no further evidence than his confirmation of the long-held
view that Horse Sickness was due to climatic causes. He had come no nearer identifying the
causative bacillus. Hutcheon himself unwisely gave as his view in an article in the *Graham’s*
56 *Town Journal* in 1885 that Horse Sickness was indeed Anthrax – a position from which he later
withdrew. The diseases of Africa South were far more formidable than anyone imagined; but
glimmerings of successful treatment were beginning to appear.

The importance of a properly-organised agricultural economy was now apparent to every
African State. By 1886/87, the wool industry at the Cape had sufficiently recovered (possibly
57 aided by Hutcheon and the writings of Hellier) to exceed £1½ million in value and soon surpassed
58 £2 million. The value of hides and skins too was increasing. Bolstered by revenue from dia-
monds, the Cape Government in 1887 resolved to institute an Agricultural Office under the
59 Colonial Secretary and with Albrecht Fischer, a German professor of Experimental Science and
Agricultural Chemistry at the Victoria College (later the University of Stellenbosch) as Secretary
but actually a general factotum with illimitable duties. In time he acquired clerical assistants



Duncan Hutcheon – pioneer veterinary scientist.



Jotello Festiri Soga – a native of the Transkei (fourth son of the Reverend Tiyo Soga) and South Africa's first qualified veterinary surgeon.

"Edington's Laboratory" or the Cape Colonial Government's Bacteriological Institute in Graham's Town, adapted from the Royal Engineers Yard and Building constructed by the British Army in 1838.





Edington at work in the most modern laboratory in the southern hemisphere.



Edington at his microscope.

and an assistant analyst. Remote in Port Elizabeth, Hutcheon constituted the 'Veterinary Branch' with Hellier to help him unofficially.

* * *

Across the Orange River, nothing stirred but across the Vaal, a voice was raised. The South African Republic had regained its independence in 1881 in a bloody war with the British, culminating in the tactical triumph of Amajuba (subsequently celebrated annually on Majuba Day) and the humiliation of the British Army. Stephanus Johannes Paulus Kruger, an extensive and enterprising farmer, became President and firmly took the government of his country in hand. Gold continued to be found in the eastern marches of his domain, bringing all kinds of rascals and rapscallions from the ends of the earth and a few respectable businessmen. Some, like the Strubens, Samuel Marks, R. T. N. James and A. H. Nellmapius turned to the land and began to farm imaginatively, particularly in the importation of stud stock and agricultural equipment. In 1886, there was yet another long-suspected gold strike, this time in the south on a low ridge known as the Wit Waters Rand. Kruger and his Volksraad concluded that it would be as ephemeral as the others and that attention should be devoted to encouraging commerce and industry. The shanty town that had appeared like a fungus on the feral Highveld was bound to become derelict in due course.

60 Very acceptable revenue could effortlessly be derived from granting concessions and monopolies. Samuel Marks bought one for making jams and preserves from the fruit he grew. Alois Nellmapius, Kruger's crony, obtained exclusive rights (some of which he later sold) to manufacture explosives, strong drink, iron, cement, pottery, sugar and other commercial commodities. But Nellmapius at heart was a farmer. Already possessed of numerous distant properties, he bought in 1886 a number of farms near Pretoria from the Erasmus family and built a seigneurial mansion on the favoured spot selected by D. J. (Rooi Danie) Erasmus. In 1888, he called his huge estate Irene after his infant daughter. Importing trained European specialists, he farmed with rare drive and imagination, his friend Kruger frequently visiting the beautiful property with its perennial streams and ancient willows.

61 Kruger, then a robust 62 but prone to periodic influenza and fogged vision due to ingrowing eyelashes, was well acquainted with modern means of farming and not unfavourably disposed; but his burghers were otherwise. No one could tell them anything. Congenitally self-reliant and for generations removed from the outward manifestations of progress, they knew better than anyone how to raise and treat cattle. They had little interest in crops. In the village of Pretoria, however, there were foreigners who not only knew about agricultural economy but saw in its absence in the Transvaal a chance for themselves.

62 In December 1887 after the Cape had enterprisingly instituted an Agricultural Office, a Hollander Dr J. J. Pronk wrote to the Transvaal Executive Council reasonably remarking that as Justice, Finance, Mining, Education, Natives and Public Works were all the care of the State, it should also embrace Agriculture, particularly in respect of Stock Inspectors, Model Farms, Experimental Stations, Agricultural Schools, Studs for breeding, stores of seeds, tree nurseries, veterinarians, water engineers, agricultural experts, etc. as well as legislation controlling Scab, Phylloxera and other diseases. Contrary to expectation, the dorp of Johannesburg on the Wit Waters Rand had not disappeared and Dr Pronk enforced his case by stressing the obvious value of its developing market. He wrote a great deal, emphasising the necessity for a Director of Agriculture (to which he expected to be appointed) but overplayed his hand. Dr W. J. Leyds, then State Attorney and also a Hollander, poured cold water on the idea; but in 1888, Dr Pronk resumed his attack. This time the State Secretary gave as his opinion that such a Depart-

ment 'would, as the English say, be "a white elephant".' Dr Pronk fell back but others soon picked up his banner.

* * *

63 There had entered the scene of sub-continental economy at this time a strange and seemingly irrelevant figure in the person of an indigenous native who was to remain unique in the history of Africa South. His story begins in one of its darker spots – the Transkei in the south-eastern Cape Colony where the Ama-Xhosa were the chief protagonists of the Cattle Wars against the first Europeans. Here there lived a notable family named Soga who early fell under the influence of the Scots missionaries sent out by the United Presbyterian Church. In 1844, Tiyo Soga, son of a chief, was sent to their settlement at Lovedale to be educated; but in 1846, the school was destroyed during the 'War of the Axe' and the missionaries sent Tiyo to Scotland. Scholastically he was not a bright boy but earnest and devout and manifestly a person of quality. He was trained as a catechist and after serving at a Transkei mission for a few years, was returned to Scotland in 1851 by the Presbyterian Church to study for the ministry. It was hard going but Tiyo was ordained in 1856 and soon after, married Janet Burnside, a shrewd and devoted Scotswoman.

The Xhosa clergyman and his white wife arrived in a devastated Transkei in 1857. Vast numbers of cattle had been killed and maize destroyed at the behest of a girl-seer Nonquase. Thousands of men, women and children had died of starvation and disease inhabited the land. Tiyo was sent to a mission at Peulton in the centre of desolation, thence to Mgwali and later to other stations, always gaining in stature among the whites as well as his own people until he became a famous figure.

64 Tiyo and Janet had seven children including four sons all of whom were sent to Scotland for their education by the Presbyterian Church and all of whom brought honour to their calling. The youngest – Jotello (a tribal name in the Soga clan) Festiri (after his uncle, a teacher) Soga – was born in 1865 and when his time came to be educated in Scotland, would have received the same adjuration from his father as his three brothers before him: 'You will ever cherish the memory of your mother as that of an upright, conscientious, thrifty, Christian Scotswoman. You will ever be thankful for your connection by this tie with the white race. But if you wish to gain credit for yourselves – if you do not wish to feel the taunt of men which you sometimes may be made to feel – *take your place* in the world as *coloured*, not as white men; as *Kafirs*, not as Englishmen . . . you, my children, belong to a primitive race of men who, amid many unamiable points, stand second to none as to nobility of nature. The Kafirs will stand high when compared in all things with the uncivilised races of the world . . .'

65 Jotello Festiri Soga went forth as a Kaffir and in 1881, enrolled at the Royal (Dick) Veterinary College in Edinburgh. In a bold hand on the 9th November 1882, he signed the College declaration of obedience to its rules and refusal to foment dissension. Like his father, he was diligent but 'not a prizeman', his only outstanding interest being in Botany. In April 1886, the Board of Examiners of the Royal College of Veterinary Surgeons announced inter alia that J. F. Soga had passed his final examinations and been admitted as a member of the profession. He had also won a gold medal for Botany.

J. F. Soga M.R.C.V.S. was the first South African to qualify as a veterinary surgeon and the first man of colour. He was more of European than Xhosa cast of countenance but had the 'kroeshaar' (crinkled hair) betokening mixed blood. Good-looking and with the noble bearing of his people, he never aped the white man. His presence was imposing and his manners, it was said, 'those of a gentleman'. Like his father, he married a Scotswoman and in due course re-

turned to the land of his birth where, it may be assumed, he resumed his fluency in the Xhosa languages as his father had done. Of his three elder brothers, William Anderson Soga was fully qualified and occupied as a medical missionary; John Henderson as a journalist and author; and Alan Kirkland as a civil servant.

66 In the time intervening, the Cape Government had proceeded with its plan to extend the Agriculture Office and to widen its activities. The exploitation of mineral resources in the Northern Cape and Transvaal had been hampered by recurrent epidemics of animal diseases which diminished the only transport available, primitive and inefficient as it was, Railways had to be built at all costs; but the horse and the ox and the sheep remained of prime importance to the country at large. At the Cape itself, the wine industry, bedevilled at the outset by recurrent fungoid infection, ceased to be a source of revenue through a catastrophic outbreak of what was popularly known as Phylloxera; but in the east, ostrich feathers produced prosperity. In 1887/88, the Government pursued its development plan and increased the staff of the Agriculture Office, including the Veterinary Branch, and proposed issuing an Agricultural Journal. By resolution of the Legislative Council in January 1888, Hutcheon was to be sent overseas to buy horses for stud purposes and to engage an assistant.

67 Hurriedly Hutcheon wrote a number of articles to fill out the new Journal which would be edited by the Agricultural Secretary, Albrecht Fischer and which would make its debut during his absence. They included a series of three 'Letters' on Lamziekte and Gallamziekte (Gall Sickness) published in May/June 1888 which embodied his combined observations and the evidence of voluminous correspondence with lay observers. In typically modest manner, he asked for comment from readers. His views on phosphate deficiency had not been accepted by those on high but had aroused the interest of a bright young man of the day, Charles F. Juritz then pursuing a three-year Fellowship at the University of the Cape of Good Hope in examining the chemistry of South Africa woods, fodder and plants. Juritz defended Hutcheon's hypothesis and went on, in ever-widening chemical analytical work, to provide the richer knowledge required by veterinary science. (In 1890, Dr Juritz was appointed chemical analyst to the Cape Government and in 1891, senior analyst in charge of all laboratories.) In the meantime, all over the country including the Transvaal, countless cattle continued to stiffen, lie down and die.

68 The *Agricultural Journal* appeared in two versions, English and Dutch, on the 22nd March 1888. Published fortnightly, it was a powerful force locally (Hutcheon was a continuous contributor of simple practicable advice to stock farmers) and became the envy of other States. In the absence of a scientific journal, it also served to inform overseas research workers of the disease situation in Africa South. In addition it was a finely produced journal which frequently reprinted important articles from all over the world as well as local work such as MacOwan's on indigenous plants as stock food and thereafter, when he became Director of the Cape Botanic Garden, a great variety of informed and helpful comment on agricultural matters. By 1890, the circulation of the *Agricultural Journal* had reached 8,000 in both languages and its articles were being reprinted in technical journals overseas.

69 Scotland again exported an essential official to the Colony's aid. Hutcheon would probably have sought one nowhere else and duly turned to his alma mater in Edinburgh. A young man J. D. Borthwick born in Kirkliston was finishing his course at the Royal (Dick) Veterinary College and agreed to come to the Cape. He graduated at the end of 1888 and then undertook a short course in Bacteriology at the hands of Alexander Edington, Professor of Surgery and Lecturer in Bacteriology at the Edinburgh Medical School as well as Professor of Comparative Pathology at the Royal Dick. Edington, an early apostle of the new science after which Hutcheon so much hankered, had already done valuable work for the Scottish Fisheries Board.

Borthwick, a solid young man of 22, assumed his appointment as Junior Veterinary Surgeon

at £400 a year on the 27th March 1889 at the point when the Cape's veterinary services were transferred from Port Elizabeth to Cape Town. Hutcheon was given minimal office space, little secretarial assistance (he dealt with his enormous correspondence and wrote articles at night at home) and a range of duties beyond any single man's competence, even with Borthwick's and Hellier's help (The expanding Agriculture Office had appointed Hellier 'Agricultural Assistant' on the 1st September 1889 at £200 a year.) Further assistance was essential.

70 Borthwick was posted to the Eastern Province (except for a few months while Hutcheon again went to England to purchase more stud stallions) and tried to deal with its plethora of diseases especially in inoculating against Lung Sickness. The 'Border' area north of the Great Fish River was more than he could manage. On the 1st November 1889, there was appointed to Hutcheon's staff as Second Junior Veterinary Surgeon at £400 a year J. F. Soga M.R.C.V.S. who immediately went into action in this area having King William's Town as his headquarters. Within a few months of his appointment, the Secretary for Agriculture formally reported that he had 'been doing excellent work, principally in connection with the prevalence of contagious Lung Sickness in cattle, in the district of Fort Beaufort, Victoria East, Stockenström and neighbouring districts', where the farmers were both black and white.

71 The Secretary went on record - 'A sum of £500 is provided on the Estimates for the employment of a professional Bacteriologist who is to enquire into our specific infectious stock diseases, at first into "Red Water" and then into "Horse Sickness". Most likely the Imperial Government who have been appealed to, will contribute a part of the cost of this temporary expenditure so that a really first-class Bacteriological investigator can be secured as only such a one had a chance of discovering the true sources of these diseases which devour year for year such a large part of the national income of South Africa.'

* * *

72 These developments were not lost on the neighbouring States, not even on the stiff-necked Transvaal. The damage to their economies was as great as at the Cape. At the moment of Soga's unparalleled appointment, no less a figure than the Surveyor-General of the South African Republic, G. R. von Wielligh (a 'Kapenaar' or man of the Cape who had come to the Transvaal in 1894) addressed an appeal to the State Secretary for an Agricultural Department. He was supported by the editor (F. V. Engelenburg, also a Hollander) of *De Volksstem* who after a time, noted that not the slightest notice had been taken by the Volksraad of either Pronk's or von Wielligh's representations.

Kruger however - primed by his Continental cronies, the Hungarian Alois Nellmapius, the Lithuanian Samuel Marks, the Hollander Struben and his sons, even the English R. T. N. James, all of whom farmed in the modern manner - was fully alert and in March 1890, stated at a country political meeting that he proposed instituting a Department of Agriculture. He announced it in his 'speech from the throne' when opening the next session of the Volksraad. It was necessary, he said, for the new market offered by Johannesburg. Labour-saving machinery must be introduced; farms must be better utilised and developed. He asked for members' urgent attention to the matter. In May, the Executive Council duly approved the proposal whereupon it was referred to the Volksraad.

That body, mainly constituted of horny-handed hairy burghers from remote areas, behaved as their counterparts have done down the ages. They were all aware of the great shortage of food which the new goldfields gobbled up in ever-increasing amounts and now imported in bulk from abroad. But they - free, independent farmers working their own lands for which they had fought - refused to countenance the imposition of bureaucratic control.

One of the members said he was tired of the whole thing. Such a thing would involve a whole lot of officials. The head would want £1,200 to £1,500 a year. He would sit in Pretoria and write brochures which a few people might read but certainly not the farmers. He would tell the boere what to do and what not to do and fine them if they didn't. Another expressed mystification that anyone should need to be told the difference between a well-bred ram and an inferior type. The difference was as clear as day and night. What was the use of talking about building dams when it just didn't rain? Others countered with the assurance that the Department was intended to dispense not discipline but enlightenment, to make pedigree stock available for breeding and to provide other facilities beyond the means of farmers. The Volksraad wavered and finally agreed to authorise the Government to frame regulations appropriate to an Agricultural Department and to publish them in the *Staatscourant*.

73 Instructions were given to a resident Hollander expert, Dr W. J. Fockens, to report accordingly. Fockens, then touching 60, had studied Chemistry, Botany, Zoology and Mineralogy at Grönigen, pursuing these subjects at Berlin and Göttingen and becoming a Doctor of Natural Sciences. On his return to Holland, he had entered civic affairs and served as burgomaster of Leek for 25 years while continuing his natural sciences research in his private laboratory. In 1884, he came to Pretoria, bought the Trevenna Estate and tried to farm there for a few years before accepting an appointment as teacher in Mineralogy at the Staatsgymnasium. He seemed eminently suitable as an adviser on the thorny problem of a new State Agricultural Department.

Within a few days, he laid his report on the table, stating inter alia that such a Department was not needed. District Commissioners for Agriculture as in Holland were all that was necessary and their joint activities could be called a department. No doubt he wished to be the Chief or coördinating commissioner. The President, his responsible officials and progressive members of the Volksraad were deeply disappointed. Fockens' plan was disregarded though, on the 13th November 1890, the editor of the *Cape Agricultural Journal* hopefully stated that 'in addition to the 8,000 local circulation, some 1,400 copies will probably shortly be ordered for the Transvaal'. Neither the Colony of Natal nor the Orange Free State had Departments of Agriculture but the Cape willingly supplied its appropriate Acts, reports and regulations to the envious progressives in the Transvaal. Before long, petitions demanding an Agricultural Department from farming areas anxious to exploit the new Goldfields' market – the Zoutpansberg, Potchefstroom, Heidelberg, Standerton, Vryheid, the Waterberg, Pretoria itself – fell like leaves into the lap of the Volksraad which talked them to death. Kruger himself could not move his obdurate burghers.

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74 The importance of the unseen world was now firmly established in the minds of progressive men in all parts of Africa South. Pasteur's Institute in Paris, run on commercial lines, had been open for two years and two of his men had been commissioned by the Australian Government to advise on the cultivating of the virus of Pleuro-pneumonia (Lung Sickness) in Queensland. Their report, widely published and reprinted in the *Cape Agricultural Journal* on the 10th April 1890, was avidly read and Borthwick, operating in the afflicted areas of the Eastern Province, began
75 'inoculating cows with a virus produced from a calf specially inoculated after the manner recommended by M. Pasteur's representatives to the Australian colonists'. Of 500 beasts inoculated, 494 took satisfactorily. Soga, 'one of the most skilful and successful inoculators' as Hutcheon testified, used the same method and greatly engaged the respect and affection of the black and white farmers. Hutcheon himself was futilely struggling with Horse Sickness and withdrawing his view that it was linked with Anthrax. He longed for the day when his Bacteriologist might come.

76 The Government of the Cape Colony, baffled by the continuous infection of vineyards with Phylloxera fungus and the ruination of the wine industry, laboriously circularised its neighbours in Africa to enquire whether they would financially support such an appointment. Natal, also losing revenue in heavy stock losses, agreed to contribute £300 per annum. Sir Charles Mills, agent for the Cape Colonial Government in London, was instructed to place an advertisement in English newspapers offering appointment for three years at £500 a year to a Bacteriologist 'to investigate the nature of germ diseases in the Cape Colony'. Sir Charles was told to consult Professor Brown of the British Board of Agriculture in regard to candidates. The offer was unattractive. Professionally-qualified men, particularly in the new and essential science, expected at least £1,000 a year, especially if the position were in the Colonies. There appear to have been no candidates.

Mills consulted Brown who caused a telegram to be sent to Alexander Edington (whose student Borthwick had been) asking him to apply for the appointment. Then aged 30 and with much officially-commissioned bacteriological work behind him, Edington was well situated as assistant to the Professor of Surgery at Edinburgh University, Lecturer in Bacteriology at its Medical School, and Professor of Comparative Pathology at the Royal Dick. A man of considerable self-importance, he regarded it as a mark of eminence that 'an important officer of the British Government' should ask him to go to South Africa. On the 23rd October 1890, he duly made application supported by testimonials. A four-month silence ensued during which Edington's friends told him that he would be a fool to go as 'South Africa was the grave of reputations' and the salary was in any case inadequate. Then, he said, he had two further offers of Colonial appointment, one from India and while considering them, suddenly received a telegram from Sir Charles Mills on the 11th February to the effect that the Cape Colonial Government had accepted his application. That he complied with the belated advice was due to the motive that sent many men to the Colonies – the desire to be in charge of their own affair and not an insignificant part of a great organisation or institution, and the glamour of the Colonial Empire, now in an exciting stage of evolution.

77 In Cape Town, salvation seemed at hand. The terrors of the unseen world would not only be revealed but methods found to combat them. Barely had the advertisement for a Bacteriologist appeared in England than the editor of the *Cape Agricultural Journal* confidently appended footnotes: 'The matter will be taken up by the Agricultural Department as soon as the Bacteriologist arrives'. He did not in fact arrive for eight months during which Hutcheon fumbled on with Horse Sickness and the many teasing diseases that he knew so well but could not fathom.

78 Edington assumed duty in London and on the 22nd March 1891, accompanied Sir Charles Mills on a tour of France to examine the latest methods of combatting Phylloxera (grafting vines on to American stock had not been a complete solution, as the Cape well knew). His duty was to assemble and equip an entirely new laboratory at the Cape. He inspected the principal laboratories in Paris, including the Collège de France and the Pasteur Institute. Then he went to Germany where, he stated, Robert Koch gave him the entrée to the principal research institutes. Thence he went to Jena, the seat of the Zeiss and other technical apparatus suppliers and completed his purchase of stores and equipment. Unlike other pioneers, he would not be starting with improvised resources but with one of the best equipped and most modern laboratories in the world. All his purchases were despatched to London and Edington himself returned in May 1891 to arrange their shipment to the Cape. He sailed soon after, landing in Cape Town on the 4th June 1891. Another Scotsman had come.

By that time, a man of sterner stuff than he, had arrived in Africa South to combat its manifold diseases and to promote the prosperity of the world at large.