The one-humped camel in Southern Africa: Their presence and use in Rhodesia (Zimbabwe) in the early twentieth century

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Summary
The one-humped camel has been introduced to many regions outside its natural area of distribution in North Africa, the Near and Middle East and South Asia. This paper describes the import and subsequent short history of camels in Rhodesia (Zimbabwe). A reported death of a camel from foot and mouth disease is an unusual reference to this affliction in this species.

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Introduction
The one-humped camel has previously been recorded as being introduced into several countries outside its normal area of distribution in north and northeast Africa, the Near and Middle East and India and Pakistan. "New" areas include Australia, North and South America, the Caribbean, Southeast Asia, southern and central Europe, the Canary Islands in the Atlantic Ocean off the west coast of Africa and countries in southern Africa (Wilson, 1984; 1998). The present note appears to be the first international one recording the presence of camels in Rhodesia (now Zimbabwe).

Import and Export
The possibility of using camels in the infant Rhodesia was perhaps first mooted in 1896 by a former colonial veterinary officer who had seen much service in India and Egypt (Leonard, 1896a; 1896b; 1896c; 1896d). By this time -- some two years after the publication of his seminal work on camel management and disease had been published (Leonard, 1894), he had been living in South Africa for just a little over a year but was already convinced that the "development and expansion of our South African empire northward, to beyond the Zambesi [sic!], towards the unknown interior" would best be achieved by the use of camels. The minicrusade he mounted -- even writing to Rhodes and receiving a polite but clearly negative reply -- met with little response. Leonard was, however, convinced that "the day is at hand, and let all those who are interested in the future of South Africa hope it is not far distant" when camels would take their rightful place in the spectrum of local domestic animals.

Leonard's articles had clearly been written just before or at about the time that the great African rinderpest pandemic reached the southern part of the continent. The day was, however, indeed at hand for Rhodesia. Draught oxen were essential to the economy of the young country in the early years of the colonization of Rhodesia both for transport and for breaking and ploughing new land for crop production. The rinderpest pandemic reached Rhodesia in 1896 and resulted in the deaths of almost all cattle, including oxen, in the country. Attempts to replace these losses were made by importing cattle (by sea through the port of Beira in Portuguese East Africa [Mozambique] as well as overland through Northern Rhodesia [Zambia] involving their having to cross some rivers tied to canoes) from German East Africa [Tanzania] in 1901. These imports of cattle were almost certainly responsible for introducing East Coast Fever (ECF) to the southern parts of Africa although the incubation period from possible infection before shipping appears rather long. A shipload of Australian cattle imported in 1902 was definitely infected with ECF when it arrived in Rhodesia. The disease may have been picked up from ticks during the overland journey from Beira. ECF resulted in further heavy losses of draught oxen whose numbers had hardly recovered from the effects of rinderpest.

As early as 1897 Mr R L McDonald, a farmer living some 20 miles from Bulawayo, wrote to the Under Secretary of Agriculture of the Cape of Good Hope, having heard that camels had been recently imported, and requesting that a pair be made available to him that he could use for transport between his
farm and the town (Letter 10 December 1897, Cape Town Archives Repository, Source AGR, Volume 445, Reference 2052). He received a rather brusque reply dated 29 December that "this Government has no intention at present of either hiring out or selling the camels." Some three years later Haddon & Cotton & Bunt: Brokers, Bulawayo and Salisbury [Harare] also made enquiries of the Secretary of the Board of Agriculture (Letter 18 May 1902, Cape Town Archives Repository, Source AGR, Volume 445, Reference 3053) regarding imports of camels. They reported that in view of the cattle disease (that is, rinderpest) they had been in touch with correspondents in Western Australia but had since learnt of "your experiments" and requested information on the results. They considered it impossible to foresee the course of the cattle disease but also that it might be necessary to provide means of transport other than by indigenous animals. In addition they requested information on the need for shoes for the camels. On 10 June 1902 the letter was forwarded to the Chief Veterinary Surgeon (CVS) of the Cape of Good Hope for his comments. In a handwritten note pinned to the original letter the CVS noted that there was little in the way of anatomic treatise on camels but that he personally doubted very much whether camels could be shod as such an intervention would cause irritation et cetera.: he was further of the opinion that if shoeing was needed it would be better to use donkeys. In a reply to the Salisbury brokers the Good Hope Under Secretary for Agriculture attached a memorandum on the use of camels in the Cape, adding that it would not be good practice to shoe camels and listing the prices of camels in West Africa and Egypt. On 27 June Haddon replied thanking the Under Secretary and indicated they had forwarded the memo to the mines.

The concept of replacing oxen with one humped camels was successfully promoted, however, mainly by a Colonel Flint of the British South Africa Police (BSAP): the British South Africa Company was a Charter Company but was largely the personal fief of Cecil John Rhodes and its police were the official law and order institution in much of southern Africa. The logic behind the proposed use of camels was that they were harder than oxen, required less water, went well in buggies, carriages and ambulances at a steady tripple (pace) of 6 miles per hour (9.7 kph) and were not susceptible to such diseases as African horse sickness, redwater and rinderpest (Anon, 1903a; Flint, 1903 (reprinted verbatim in Anon, 1903c)). The reference to African horse sickness is of interest as it indicates that camels were also to substitute for horses as well as cattle. Unlike many early African livestock initiatives Colonel Flint's proposals for the introduction of camels came to fruition. It was originally intended to import 50 animals from India but eventually, because the £600 allocated to purchase arrived late in India and the onset of the monsoon when the money did become available, only 34 were finally selected and purchased. These comprised 9 bulls and 11 cows of Gujarkhan breed of "baggager" camels and 10 bulls, 3 cows and 1 heifer of the Batinda breed of riding camels. The animals were certified by the Port Veterinary at Karachi [now in Pakistan] as the "the best batch of camels that has ever been shipped from this port". A memorandum from E Ross Townsend, Secretary of the Department of Agriculture to the Chief Secretary in Salisbury (Cape Town Archives Repository, Source AGR, Volume 445, Reference 3053) as well as the account of Colonel Flint (Flint, 1903) provide full details of the purchase and transhipment. There were no problems on the sea journey and the camels did not seem to be unnerved by being offloaded from the ship on to barges which were then beached in the shallow water (Figure 1). The overland journey was also accomplished without mishap and the animals arrived in Salisbury from India on 9 May 1903 (Flint, 1903). The imported group comprised animals of 3-8 years old varying in withers height from 6 foot 3 inches to 7 foot 1 inch (190.5-215.9 cm) -- and thus all larger than the Indian average -- plus one 8-month old female. The average price paid in India was £7.0.0 in the range £4.13.4 to £10.13.4 (the former for a female baggager and the latter for a very fine 2-year-old riding camel). Colonel Flint considered that the cost could be kept to £40 per head if reductions in rail freight costs could be effected -- draught oxen in Salisbury were selling at £20 per head at that time.

Also imported with the animals were a quantity of harness, a light camel wagon and other "paraphernalia". In addition the camels were accompanied by one "salutri" (an Indian native veterinary officer) who was contracted at £15/month, one headman (£2.6.8/month), one head mate (£1.13.4) and 12 camel drivers (£1.4.0 each per month). These men received free kit and rations in addition to their wages
and would have a free passage back to India when they wished to leave. In a somewhat more detailed report from the Department of Agriculture in Salisbury to the Resident Commissioner dated 7 December 1903 we learn that from their point of purchase in northern India the camels were transported by rail to Kurrachi [sic!] and then embarked in a British India Steam Navigation Company's boat and landed at Beira. From Beira they were again transported by rail in coal trucks covered with tarpaulin and arrived in Salisbury without a single casualty. Most of the females were later segregated to a farm and used only for light work as their main vocation was considered to be breeding. Some males were also sent to this farm and used for ploughing in connection with normal farm work. An initial request by the High Commissioner in Johannesburg to publish the price of the camels brought from India was not consented to by the Resident Commissioner in Salisbury as "owing to personal influences purchase was effected under conditions which would not be available to general public" (letter No 50, 2 December 1903, (Cape Town Archives Repository, Source AGR, Volume 445, Reference 3053)). The estimate of £40 per head delivered Salisbury was, however, probably very optimistic. In a later letter to the Under Secretary of Agriculture in Cape Town dated 18 April 1904 the Secretary for Agriculture in Salisbury provided detailed costs. These were (in 1903 pounds which had obviously been rounded to the nearest unit):

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of 34 camels</td>
<td>240</td>
</tr>
<tr>
<td>Transport to Salisbury including landing and dock charges</td>
<td>1135</td>
</tr>
<tr>
<td>Transport, rations and pay of Native Veterinary Assistant and 14</td>
<td>180</td>
</tr>
<tr>
<td>Purchase and transport of equipment</td>
<td>137</td>
</tr>
<tr>
<td>Purchase and transport of camel rations</td>
<td>75</td>
</tr>
<tr>
<td>Expenses of officer purchasing</td>
<td>153</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1920</strong></td>
</tr>
</tbody>
</table>

The foregoing list clearly shows transport to be the major element of the total cost structure but it is unlikely that rail charges were a large factor in this. The cost of camels shipped from Suez in Egypt to Durban in Natal (South Africa) in early 1903 was £30 per head and it does not seem feasible that it would have been cheaper from Karachi to Beira. Cost savings would therefore have needed to derive from the shipping charges rather than from those attributed to rail transport.

Shortly after the arrival of Colonel Flint’s camels some of them were re-exported to the Cape. The Officer Commanding the Cape Police had purchased 12 camels in Southern Rhodesia and wished to

![Figure 1 Camels walking ashore from barges at Chonde in Rhodesia [Zimbabwe]](image-url)
transport them by rail from Bulawayo to De Aar (hand written draft memorandum from CVS to Under Secretary for Agriculture, 11 November 1904 subsequently typewritten and signed by the Under Secretary, (Cape Town Archives Repository, Source AGR, Volume 445, Reference 3053)). The CVS noted that the Agriculture Department had no objections and that the Colonial Secretary’s Department should be advised. The Department of Agriculture’s “no objection” was, however, subject to conditions and precautions which had already been explained to Major Elliot (of the Cape Police service). These conditions noted that consent must be obtained from the Resident Commissioner of the British Protectorate (that is, Bechuanaland) for the camels to pass through that territory by rail, that the animals must be clean of ticks, the rail wagons must be closed at the bottom and up the sides and be thoroughly disinfected, and that no hay, forage or other food be put on board in Rhodesia but that the wagons could be bedded with saw dust: arrangements for forage and other provender were to be made at Palapye (in the then British Bechuanaland about 150 km south of Francistown). Once arrived at De Aar (some 650 km to the north of Cape Town) the wagons were to be taken to a place where manure and any remaining food could be burned and the wagons cleaned and disinfected. The CVS did not “consider that there is any danger of these camels carrying African Coast Fever but [...] suggest these precautions for the satisfaction of the public”. On 30 November 1904 the Chief Traffic Manager wrote to the Under Secretary (ibid, Cape Town Archives) requesting that he inform the representative at Vryburg (250 km north of Kimberley and a similar distance south of Mafeking) to arrange with the Station Master for the examination of the camels purchased from the BSACo. He also indicated that the animals would be put on the rail wagons at Gwelo (approximately half way between Salisbury and Buluwayo) but could only be insured by this (that is, Cape) administration from Vryburg to De Aar. The expected departure was on “10 prox” (that is 10 December) to reach Vryburg at 12:20 a.m. on 12 December but that these arrangements would be confirmed. The total distance by rail from Gwelo to De Aar would have been about 1600 km. There are several other exchanges of correspondence on this subject and especially on inspection right up to 12 December. The CVS recommended that the camel handlers in Rhodesia should be taken on in South Africa under the same terms and conditions to train the Cape Police but he was turned down by the Under Secretary for Agriculture who said that both the Law Department (for the police) and the Post Office were already well satisfied with their own management arrangements. There is also correspondence noting that camels in Rhodesia were infected by mange which prompted the Secretary of the Law Department to write to the Attorney General that camels imported to South Africa should be obtained from the same sources as the earlier imports. There was clearly a delay in the shipment of the camels as on 15 December 1904 C R Edmonds, MRCVS, Government Veterinary Surgeon certified in Bulawayo that the animals were in a sound and healthy condition CGH (Cape Town Archives Repository, Source CO 8237, Reference X30). There is later internal correspondence in the Cape Archives regarding these camels after they had been received in CGH (Cape Town Archives Repository, Source CO 8237, Reference X30). Sub-Inspector Currie collected the camels at De Aar – whither they had been delivered by no less a person than Colonel Flint himself – and wrote to the Officer Commanding ‘S’ Division of the Cape Mounted Police on 10 January 1905. He took charge of the camels on 20 December and found them to be in very poor condition which he attributed to their being tied down in trucks for five days without food or water. On the road from De Aar to Upington the camels, which in accordance with Colonel Flint’s instructions had been receiving “no less than 32 lbs of oat hay and oats per diem, had to be rested as they were very footsore on account of the stoney conditions”. Currie also expressed his displeasure with the saddlery which was “sadly in want of repair; six saddles are absolutely useless and fastened together with bits of string”.

There is one other record of camels in Rhodesia although the geographical location is not exact. This was in 1915 when eight Germans and one rebel Dutchman with five camels and one horse were captured on the southern border of Northern Rhodesia by a mobile unit of the Northern Rhodesia Rifles (Clay, 1962). It is believed these people were fleeing from Southwest Africa [Namibia] and attempting to join the forces of Colonel von Lettow-Vorbeck in German East Africa. They were successfully prevented from escaping by the one guard put in charge of them by the simple expedient of confiscating their trousers every night because "it is impossible to ride a camel without trousers".
Use
General transport

The baggage animals from Colonel Flint’s original lot were set to work transporting maize from Goromonzi some 40 km east of Salisbury. The first part of the journey was accomplished by back packing and the remainder by camel drawn wagon (Flint, 1903). Males carried three 200 pound (90.7 kg) sacks and females two sacks on the 20-25 km journey through the "bush". On the road eight camels were able to do the work of 16 oxen in drawing a wagon loaded with 8000-10 000 pounds (3629-4536 kg) and do it faster. Details of the harnessing system are provided in a letter dated 9 October 1903 from the Resident Commissioner in Salisbury to the High Commissioner in Johannesburg (Cape Town Archives Repository, Source AGR, Volume 445, Reference 3053). Shortly after the arrival of all the camels two baggagers were sent to Victoria District under the control of a Sikh and a native boy to work for the Native Department: these arrived back in Salisbury after two months in excellent condition and having performed most satisfactorily (letter of Agriculture Department dated 9 December 1903).

In a later memo Colonel Flint was quoted as saying:

"As compared with oxen eight camels of the class in hand, acting as a wagon team, can do the work of 16 strong draught cattle and can travel faster and do longer treks. Their feet also are harder, for oxen would need shoeing in the districts where these animals are bred, though desert animals with softer foot pads would not be suitable for work in Mashonaland."

It was, however, found impracticable to work the baggager camels with heavy back loads on steep clayey slopes when these were wet as the animals slipped a great deal although a proviso was added in that this was the case with most animals). On 27 July 1904 in response to a request from the Cape of Good Hope about the possibility of the latter buying camels from Rhodesia the Chief Secretary in Salisbury informed the Charter company’s office in Cape Town that trials on the usefulness of camels were still going on between Victoria (Masvingo) and Selukwe (Chirugwe) to the south of Gwelo (Cape Town Archives Repository, Source CO 8237, Reference X30).

Police work

After their arrival and settling in period the riding camels were used by the BSAP on regular patrols. A total of eight baggage and two riding camels were initially handed over to the BSA Police Transport Department. These were placed under the supervision of a Sergeant of the Police who received three months training under Colonel Flint and who had received a certificate of competency in their management. The double saddles used by the police clearly indicate the original area of provenance of the camels in India (Figure 2). In addition to the police many private people including Lady Clarke, the Administrator’s (Governor) wife in "Charterland", also learned to ride the animals (Anon, 1903b).

Colonel Flint again waxed lyrical on the qualities of riding camels:

"For continuous long journeys the riding camels are far superior to any horse, for no hack or trooper could live with a riding camel after the third day, the latter carrying a month's rations, bedding etc., and doing its 40 miles per diem. The same animals will go in buggies, carriages and ambulances at a steady six miles an hour triple [sic!] and, when necessary can do with less water than any other riding or transport animal".
Figure 2  Colonel Flint's camels in 1910 (Troopers Richards and Armstrong on camel at left, Corporal Page at right, Trooper George on crouched camel)

Postal services

One of the main roles of the camel in southern Africa about the turn of the 19th and 20th centuries was the provision of postal services. Rhodesia was no exception to this use.

In a letter dated 9 October 1903 from the Resident Commissioner in Salisbury to the High Commissioner in Johannesburg reference is made once more to the ubiquitous Colonel Flint (Cape Town Archives Repository, Source AGR 445, Volume 4, Reference 3053 [with copies in other sources]). He had just returned from an inspection of a proposed post route from the Ayrshire mine (the end of a 75-mile railway from Salisbury) to a point on the Zambesi opposite Feira whence there was a postal service to Fort Jameson in Nyasaland [Malawi]. Nine camels – together with Colonel Flint, one BSA policeman, 5 Sikhs and 2 Mashonaland natives – went on this trip and carried, exclusive of the 40 lb (18.1 kg) saddle, an average load of 280 lbs (127.0 kg) over a distance of 400 miles (643.7 km) and on the last day traversed a distance of 60 miles (96.6 km) over "Kaffir paths" that were considered difficult for horses. The average speed of the animals was 5 mph (8.0 km/hour). Over the last 100 miles (160.9 km) to the Zambesi and for the same distance on the return the camels had no grain but ate only local grass and bushes. A Mr J du Plessis, a minister of the Dutch Reformed Church, met this string of nine camels on the Panyani River and made extensive notes on it in his diary (Clay, 1962). The "natives" accompanying Du Plessis on his journey south from Feira in Northern Rhodesia were clearly astonished at these animals and "evinced great interest in the new-comers, whom they describe as hybrids between an ostrich and a mule".

Camels were also used in post coaches on the Salisbury-Fort Victoria [Masvingo] route (Louw Hoffman, Pers. Comm.; University of Stellenbosch, Private Bag XI, Matieland 7602, South Africa). They appear, however, to have been unsatisfactory, and were quickly replaced by mules.

Disease

Disease was a major factor in the decision to import camels. As already indicated they were not considered to be susceptible to rinderpest, redwater (a tick-borne infection) and African horse sickness. The original camels were, indeed, to "be put to transport work, carrying in grain from the out-lying districts
where bullock transport is not permitted under the Redwater regulations”.

An internal letter of the Department of Agriculture dated 7 December 1903 reported the death of a female camel on 5 November. The diagnosis was cirrhosis of the liver and dropsy, the latter being predisposed by the age of the camel and the fact that it was in calf. In the same letter it was indicated that some camels were suffering from mange, probably picked up from blankets and saddlery, but that this could easily be cured.

The first reference in the public domain (as opposed to internal government correspondence) to camel diseases appeared on the very first page in the very first issue of the Rhodesia Agricultural Journal (Anon, 1903a). This editorial tended to support the view of Colonel Flint that camels were not susceptible to the common diseases of traditional domestic livestock. The second -- and only other specific -- reference is to foot and mouth disease from which one of the imported camels was purported to have died in 1904 (Anon, 1904). The "splendid record achieved by our first batch of camels has at last been interrupted by an outbreak of Foot and Mouth Disease at the camel camp, Goromonzi". A detailed description of the post mortem examination ended in the conclusion that "from the foregoing conditions I [i.e. Government Veterinary Officer Bruce] have no hesitation in saying that the animal suffered from FMD". In another attribution, however, Bruce had the "opinion that the camel is suffering from a form of stomatitis and not foot and mouth disease" with a probable bacterial cause although there was also the possibility that the camel had been eating some plant irritating to the mucous membranes (Letter of Department of Agriculture dated 7 December 1903). One month after it was affected the animal was on the high road to recovery and no other animals had suffered the same disease.

The published record may have been misleading but there also appears to have been confusion within the administration itself. A telegram from the Salisbury Resident Commissioner to the High Commissioner in Johannesburg dated 16 December 1903 and a subsequent one of 19 December stated that three camels had died "from a disease resembling but not identical to foot and mouth disease and some of the affected animals have recovered". On 28 December the diagnosis had become firm with the cause of death being definitely "identical to foot and mouth disease". In all these telegraphic communications it was considered "desirable that the report should not be published until a thorough investigation has been made into the causes and nature of the disease in question" (Cape Town Archives Repository, Source AGR, Volume 445, Reference 3053). A further letter of 13 January 1904 from Salisbury to Johannesburg reported another death and also that the Veterinary Surgeon (Bruce) was now convinced that the problem was indeed foot and mouth disease. A quarantine was imposed on the area surrounding the location of the camels (Government Notice No 17, 1904) under the Animal Diseases Ordinance 1901 but this was rescinded by Government Notice No 114 of 12 May 1904 and movement of animals in the defined area was again allowed.

The reference to foot and mouth disease is in itself interesting and perhaps rather confusing. In the camel literature of the 1980s and 1990s, for example, there are only four references to foot and mouth disease in camels and all of these are from experimental work in Egypt (Moussa et al., 1980; 1987; Nasser et al., 1980; Abdel-Hamid et al., 1992). In these studies the presence of antibodies in 70 per cent of camels was not associated with a clinical expression of foot and mouth disease although in one experiment three camels inoculated with foot and mouth disease virus showed symptoms and the virus was isolated from blood, faeces and the oesophageal region: an adult non-experimental contact animal did not, however, show any infection. Another Egyptian observation noted that camels do not contact infection during enzootics in cattle and, indeed, it is not known if the camel acts as a reservoir of infection or is able to transmit it to other species. The Rhodesian reference to camel foot and mouth disease is therefore something of an enigma and may be a wrong diagnosis as indicated by Veterinary Officer Bruce in yet another conclusion that "the course of the disease in the camel is somewhat different to that seen by me in cattle and sheep".

Ultimate fate of the Rhodesian camels

In spite of the initial interest camels turned out to be a largely transient phenomenon, possibly because the cattle population recovered following the rinderpest pandemic. After the first spate of short publications there were no further references in the Rhodesia Agriculture Journal nor in The African Review. Zimbabwe's National Archives contain several photographs of camels but formal or informal written material other than that referred to here appears to have been lost. Fortunately some of these materials have been preserved in archival sources in the present day Republic of South Africa. The small number of imports did,
however, travel widely in Rhodesia and there are photographs of them in various towns throughout the
country from north to south and from east to west. The last of these from Gwanda -- in the dry southern low
veld of Rhodesia about 100 km south of Bulawayo and in an area more ecologically suitable to the camel
than the higher and wetter parts of the country to which it was first imported and used -- shows a BSAP
patrol and dates from 1910 (see Figure 2).

It is likely that in Rhodesia – as in Australia – once the economic value of the camel had run its short
span they were allowed to die of old age or were allowed to wander off into the veld. The fate of a camel
shot by the hunters/settlers Martiem Hoffman and Danie Hartman near the Great Zimbabwe ruins not far
from Fort Victoria when they were on a hunting trip in the area (Louw Hoffman, Pers. Comm.) may well
have been the destiny of most of the few camels that trod Rhodesian soil for a few short years early in the
 twentieth century.

Acknowledgements
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the Republic of South Africa for assistance in locating records. Louw Hoffman very kindly supplied
information he obtained from his father about the use of camels in post coaches on the Salisbury-Fort
Victoria route and the shooting of a free-roaming camel by his granduncle Maartiem Hoffman.

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