

Desiccation and rain rockets: Natural disasters and climate change in South Africa

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Introduction

THIS article will discuss how historical weather patterns have been addressed by farming communities in KwaZulu-Natal, South Africa. It will address the effects of ‘desiccation’, before employing historical anthropology to describe how climate was interpreted, addressed and accepted in the past.

South Africa is currently experiencing a devastating drought, combined with what is seemingly severe social and political disruption. Some view the drought as the impact of *El Niño*, others see it as a result of a decline in morality in a post-apartheid, neo-liberal society. The drought has coincided with the first major recession since the appointment of the democratic dispensation in

1994. This has, for many, intensified the interpretation of the reasons for the drought. However, the drought is not a new phenomenon, being part of an historical cyclical wet/dry system. Furthermore, gradual change in climate appears to have been identified as early as the mid-nineteenth century in the Cape Colony, with the trends being described as desiccation, resulting in the writing into law of the requirements for the retention of indigenous forests, legally circumscribed as ‘Crown Forests’ to preserve the environment. For South African farmers both subsistence and mechanical, drought and floods are not a new challenge. Cycles of feast and famine, wet and dry, are abundant in the social records of the last century,

showcasing the optimism and desperation of people working the land.

This paper will employ methodologies of historical anthropology to discuss climate variation and climate change in KwaZulu-Natal, South Africa. Archival records, documents produced by farmers' associations and the Natal Agricultural Union will be used to interrogate this subject, in addition to situating more recent assertions which attempt to explain the current crisis.

Desiccation

In the early 1990s, Richard Grove described the re-emergence of a theory of 'desiccation', which linked deforestation, change in rainfall patterns and climate change. Our discussion is not new, as the sources that Grove cites were part of the imperial period, and record the implementation of forest preservation in Mauritius in 1867.¹ Significantly, Witt notes that

As the global expansionism of European interests continued, further evidence of soil erosion and deforestation was encountered. These observations of environmental degradation were recorded by a variety of colonial administrators and scientists, who witnessed, at close hand, the destruction caused by colonial expansionism, especially the denudation of previously wooded areas.²

This discussion naturally trickled through to the Cape Colony, in which severe droughts in the 1820s, 1840s and 1860s 'provided major catalysts for state intervention',³ culminating in the Forest and Herbage Act no. 18 of 1859 being passed in the Colony. The discussion then, in the colonies comprising the contemporary South Africa, was well underway by the beginning of the twentieth century.

For the Colony of Natal, a brisk series of colonial ordinances and proclamations were promulgated at the end of the nineteenth century.⁴ This did not, however, prevent a series of devastating natural events at this time, namely a major drought at the beginning of the 1890s, followed by a locust invasion and, subsequently, the bovine disease rinderpest. These events all impacted severely on the economy of the young Colony, as well as having a lasting effect on the lifeways of the aboriginal inhabitants, rapidly moving from a comfortable subsistence economy to one dependent on wage labour and shifting power relations in subservience.

For the aboriginal Zulu, environmental calamities were named. Whilst pre-colonial effects of climate change are not empirically recorded, old men at the turn of the twentieth century recalled a famine known in Zulu as '*uMadhlature*',⁵ which took place around 1800. The effects were a series of untraditional practices speaking to survival, including theft, hiding food and cattle, and the manner in which meals, when there were meals, took place. Ndukwana, interviewed in 1903, indicated a drought named *iQwaningi*, a famine at the beginning of the 1840s, in which the '*Nomahlala* ate aloe flowers. They hurried in with the birds'.⁶ Another, later famine was recorded as being the *uMdweshu*, around the early 1850s.⁷ The association with astronomical events was pointed out by Socwatsha in 1910, when he observed that 'war and hunger come when the comet appears'.⁸

Most of the nineteenth-century effects have found their way into the history books through the official histories. It is the pertinent observations of the magistrates, however, which explore the

degree to which optimism and energy are connected to planting in consequent seasons. It appears that drought years were often followed by locust swarms, arriving as the crops emerged through the topsoil, effectively wiping out the next season's harvest. The end of the 1890s was typical, with years of drought, famine and locusts.

Trials and tribulations

The year 1906 is significant as the year of great troubles for the young Colony. The Anglo-Boer War, devastating in its own right from an environmental point of view, was followed by drought and heavy snow in the early spring of 1905. The 1904 droughts were indicated by Socwatsha in his interview with James Stuart in that year. Baskets were used as measures for the maize that was purchased from traders. Up to six sacks of such measures were traded for a cow. In 1906, the *Blue Book for Native Affairs* noted that 'in some districts of the Colony a total or partial failure of crops has been experienced and that Natives have been obliged in consequence to subsist on, or to supplement their own produce by, grain produced from traders'.⁹

Minnaar records the droughts in Zululand as being in 1914, 1917 and 1923–4.¹⁰ This latter drought appears to have been felt more keenly inland, with areas of significantly lower rainfall. In April 1926 the Estcourt Farmers Association motivated that Estcourt be declared a drought-stricken area.¹¹ This state of affairs prevailed, as farmers in the nearby town of Colenso were stricken, as with many other towns around South Africa in the early 1930s. The effects of the Wall Street Crash were felt in South Africa, too. Farmers Association minutes in 1931 reflect

distress as to the Great Depression and comments about compelling the government to go off the gold standard, as well as reticence about declaring the Colenso area a 'drought-stricken area', for fear of the subsequent effects. Farmers in New Hanover recorded this with similar reservations.

It would appear that they had claimed drought relief from the government as in April 1932 the issue concerning deproclamation of the drought area was raised. However, at a general meeting held on 13 May 1933, 'A letter was read from the magistrate appealing for grazing for cattle from (other) drought stricken areas. The meeting instructed the secretary to reply pointing out that practically all farms in this district are overstocked at present and no grazing was available from members present.'¹² Minnaar records the droughts in the early 1980s around the Heatonville/Ntambanana area in Zululand.¹³ At best this area is described as dry, rugged country, suited for extensive cattle ranching, perhaps, but totally unsuited for settlement and crop cultivation. Its annual rainfall is about 800 mm, on average¹⁴— and drought is a recurring problem.

In 1981 a farmer who had 'battled for 28 years to make a living there' and eventually left the area 'penniless', described it in these terms: 'I know what it is like to farm in Ntambanana. It's impossible. It is dry, thorn country with one permanent running stream in the whole area. The soil is shallow, unfertile clay and the main river, the Enseleni, consists mainly of polluted pools unfit for humans or animals.'¹⁵

The other significant disruptions were the cyclical seasons of flooding. Although not experienced throughout the east coast littoral to the same degree,

the effects of flooding for early settlers created massive setbacks in infrastructure development. The cataclysmic flood of 1856 was described by George Russell, to the effect that the Umgeni River changed its course to partly drain into Durban Bay, leaving 'yellow river water and debris, reeds, trees, utensils, animals, alive and dead, alligators, snakes and cane rats'.¹⁶

Rain rockets

Summoning rain was a solution to long-term drought. Indigenous societies addressed the summoning of rain in many ways – the Hlubi people are renowned as great rainmakers, and travel up mountains to summon the appropriate spirits to break droughts. A progenitor, Bhungane, was revered as a traditional doctor through most of the region. Selby Hadebe speaks of the oral literature that

It is said herds of cattle from as far as Zululand were driven to Bhungane in exchange for medicine to make rain when there was drought. It is also said that during Bhungane's time good rains were the order of the day and crops were plentiful. People ascribed this to Bhungane's power to make rain.¹⁷

Wright and Manson add: 'such was his renown among his people that a hundred years later their descendants still remembered him in the expression uttered especially when good rains fell: "uBhungane wenza ngakuningi" (Bhungane creates abundance)'.¹⁸

For white farmers, summoning rain was also attempted. On 29 April 1965, under the heading 'Rain Rockets', the New Hanover Farmers Association recorded that 'Mr Bartels opened the discussion by informing the meeting that he and several others had seen that the firing of rockets had definitely

caused heavy cloud formations to disintegrate.'¹⁹ The visit of this travelling salesman is also recorded in the annual volumes of the Tongaat Sugar Company, the *Condenser*. This depicts the cartoon figure of a rain rocket salesman, perhaps the same person who visited the New Hanover farmers some years later.²⁰

Great rains become almost mythical. The floods of 1918 and 1957 impacted severely on many areas of the province – in 1918 they washed away newly constructed sugar canals and associated mills in the area around Mtubatuba, leaving many emergent settler farmers destitute. Ironically, knowing the risks from experience, local African inhabitants had warned newly settled farmers in the area about the effects of flooding on the Umfolozi to no avail. The sugar mill situated on the original river bed of the Umfolozi River was washed away along with all the newly planted cane.²¹

This particular part of the province, given its geology and landscape, is continually hard hit. Minnaar describes flooding in 1925, 1932, 1935, 1940 and on and on through the decades. The year 1957 was particularly bad, with two floods affecting the Zululand area and



large sections of coastal Natal. For most of the province, two cyclones in the late 1980s had massive effect. Minnaar considers Cyclone Demoina in 1984 as possibly one of the most disastrous in history.²² It affected large sections of the coastal region. A second cyclone, Cyclone Imboa, was mentioned in the Dalton and District Farmers Association Minutes on 2 October 1987, noting damage to African homes.

Fundamentally, the cycles of drought and flood are prevalent in the articulated experiences of the nineteenth and twentieth century inhabitants of the lands that make up the contemporary KwaZulu-Natal. Famine, it seems, exists under both circumstances. In the 1918 floods, famine was experienced, not as a result of problematic growing conditions, but rather the inability for relief supplies to reach across the Mhlatuze River.²³

Conclusion? Drought, famine and flood are historic cyclical experiences in KwaZulu-Natal. One is tempted to suggest that the severity of the recent climatic events is not necessarily as a result of any specific change in climate, but more locally a need to demonstrate more proactive planning given a drastically increased population and critical changes in land use over the last two centuries.

NOTES

1 Grove, R., quoted in Harald Witt, 'An economic, social and environmental study of afforestation: A case study of tree-growing in Natal, 1900–1960' (MA Economic History, University of Natal, 1996), p. 25.

2 Ibid.

3 Ibid. p. 28

4 Marwick, C., *Green Shadows* (Pretoria, Department of Environmental Affairs, Forestry Branch, 1984) p. 7.

5 Webb, C de B and J. Wright, *The James Stuart Archive: Volume 6* (Pietermaritzburg, University of KwaZulu-Natal Press, 2014) p. 127.

6 Ibid. p. 275.

7 Ibid. p. 127.

8 Ibid. p. 84.

9 Colony of Natal. *Blue Book for Native Affairs*, 1906, p. 6.

10 Minnaar, A de V., *uShukela: A History of the Growth and Development of the Sugar Industry in Zululand: 1905 to the Present* (Pretoria, HSRC, 1992).

11 Estcourt Farmers Association Minute books. Unpublished.

12 New Hanover Farmers Association Minute books. Unpublished.

13 Minnaar, *uShukela*, p. 32.

14 Thorington-Smith, E., L. Rosenberg and L. McCrystal, *Towards a Plan for KwaZulu: A Preliminary Development Plan* (Ulundi, KwaZulu Government, 1978) Vol. 2, map 11.

15 Platzky, L. and C. Walker, *The Surplus People's Project: Forced Removals in Natal*. (Johannesburg, Ravan Press, 1985) p. 534.

16 Russell, G. *The History of Old Durban and Reminiscences of an Emigrant of 1850* (Pietermaritzburg: P. Davis & Sons, 1899) p. 270.

17 Hadebe, Selby Bongani, 'The History of the amaHlubi tribe in the izibongo of its kings' (MA, University of Natal, 1992), p. 68.

18 Wright and Manson quoted in Hadebe, 'amaHlubi tribe', p. 68.

19 New Hanover Farmers Association Minute books. Unpublished.

20 Tongaat Sugar Company, *Condenser* (Tongaat, Tongaat Sugar Company, 1948) p. 17.

21 Minnaar, *uShukela*, p. 110.

22 Ibid. p. 122.

23 Ibid. p. 109.