

The Great Flood of 1856

The gale-force winds and accompanying deluge which struck Natal in April 1856 causing catastrophic flooding in the Durban vicinity, have probably not been equalled in severity since the white man first colonised the territory in 1824. At the time of this great flood a journalist reported that 'one old man here says there was just such a rain when he was a small boy, but not since till now';¹ this informant was presumably a Zulu recalling a storm which took place around the first decade of the nineteenth century.

A couple of unusual phenomena had been sighted in the skies prior to the start — on Sunday 13 April — of the 1856 storm. The first was the appearance two weeks earlier of that remarkable electrical manifestation the *Aurora Australis*, or Southern Lights. A newspaper correspondent, J.S. of Durban, wrote that on 30 March he had seen 'distinct and beautiful bars of luminous haze across the heavens'² and that he had witnessed these effects once or twice since then, including their observation at 2 a.m. on 4 April. Aurorae are thought to be correlated with severe magnetic storms and to appear about every eleven years, coinciding with the cycle of solar activity which gives rise to sunspots on the sun's surface.

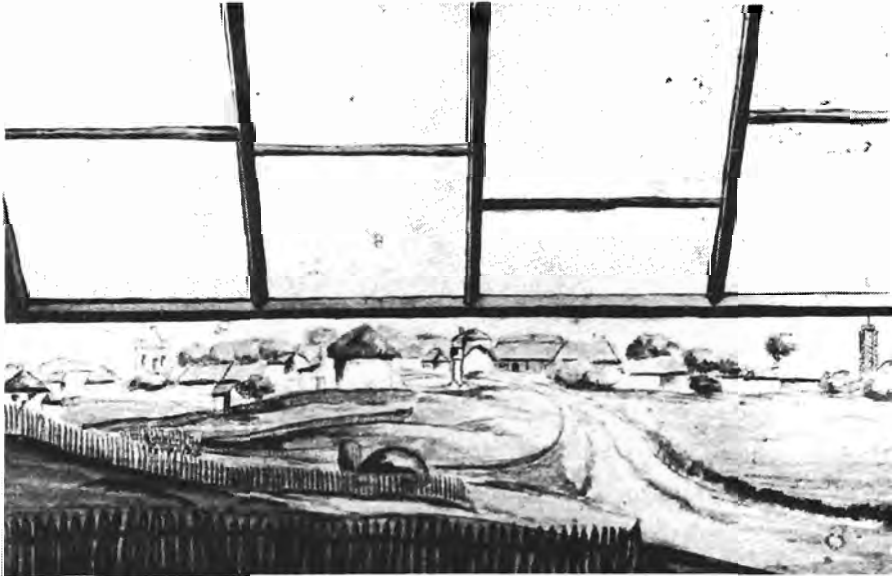
The other strange phenomenon occurred on Friday 11 April, when a single halo was observed around the moon. 'There is no scientific support for the popular belief that haloes are followed by heavy rain and storms', wrote a meteorological official nearly a hundred years later.³ He declared that a halo was merely the result of high cirrus clouds which, at a height of 10-15 000 metres, refracted the sun's rays reflected by the moon, giving a dark shadow around the moon which had nothing to do with rain. The Scots call it a 'brach', saying that a big one indicates a nearby storm and a small one, a far-off storm. The Zulus say it portends tragedy.

On Sunday 13 April banks of clouds were seen rising in the south-west and by 2 p.m. the sky at Durban was overcast. An hour later the rain began to descend in torrents and did not cease until Tuesday afternoon. During this violent storm the maximum temperature dropped sharply, suggesting the passage of a cold frontal system. The barometric pressure rose, and the often gale-strength winds blew mostly from the south-east, which was considered unusual but was known, even then, to be indicative of heavy rains. The wind was relatively warm and heavily moisture-laden when it struck the cold front, which was moving at right angles to its path. The resultant downpour, principally in the Umgeni catchment area, brought the river down in spate from its upper reaches to its mouth in the Indian Ocean. In the inland regions the river was said never to have risen so high since the first occupation by the white people in the 1830s.

On the night of Monday 14 April the townspeople of Durban began to fear that the Umgeni would burst its banks once the watershed runoff had augmented the normal river flow, bringing the river down in such volume as to flood the low-lying ground. They had had experience of this before, when in April 1848 the Umgeni had broken through its bank and flowed into Durban Bay, and some people kept a rather perfunctory watch that evening, but then retired to bed thinking all was well.

One such man was George Potter, the manager of the Springfield Sugar Works, who remained up only until 10 p.m. at his house on the Berea, before turning in for the night. 'Within one hour,' he later reported, 'we were startled by the noise of waters as of a mighty rushing sea, where upon arrival at the mill we found the whole surface of the flat covered with water to the depth of at least 15 feet, and a foot on the floor of the mill'.⁴ Two hours later they could not remain inside this building as the water was now one-and-a-half metres deep, and lay five-and-a-half metres deep on the cultivated land. The newly constructed sugar mill succumbed to the pressure of the waters and collapsed, and crops were borne along upon the immense flood. The loss at this mill was estimated at £3 000 — an enormous sum in those days — and operations were retarded for at least a month.

Many of the townsfolk suffered unnerving misadventures in the early hours of Tuesday: James Vincent awoke just in time to save himself and his horse, before the floodwaters of the Umgeni swept away his house, his furniture and other possessions, and his cattle. When the Umhlali River came down in full spate Thomas Reynolds inspanned his oxen in preparation for moving his family to safety, only to find that before they could move, the waters had broken through the restricting banks and came swirling at them from two directions at once, surrounding their position; they were obliged to remain there until the waters had subsided.



View from Moreland's office, West Street, Durban.

(Photograph: Natal Archives C7613)

At his house on the banks of the Umlazi River Benjamin Smart's attention was drawn on Monday night to the presence of seeping waters in his dwelling. Fearing that an attempt to escape might prove fatal to his family, he helped his wife move their four small children into a barn standing upon higher ground than their home 'and there they cooked food until rising waters put a stop to their operations'.⁴ They then clambered into a sort of loft resting above the tie-beams of the building, where a quantity of beans ready for threshing was able to provide a reasonably comfortable resting place for their sojourn of more than two days and nights.

'Mr Smart was often seen upon the ridge of the building waving his hat,' we are told, 'but observers had no idea that the human group were "up-a-loft", boiling their kettle inside a baking pot, which was suspended from the ridge pole by a riem'.⁴ This resourceful family was rescued by Richard King, hero of the famous ride to Grahamstown in 1842, who constructed a raft of reeds upon which he placed two large boxes; by his 'gallant and daring humanity . . . at much personal risk [he] effected the deliverance of this second Noah and his family'.¹ And this was despite the fact that during the night King knew he had lost virtually the whole of his sugar cane plantation, flattened by raging floodwaters. The Smart family had had an earlier misfortune in that their home had been destroyed by fire only a few months previously.

George Cato, mayor of Durban, American consul, banker, merchant and general adviser, had the bad luck to find his new schooner carried off its stocks in the Bay at the height of the Umgeni River's inundation of Durban, which occurred at 7 a.m. that Tuesday. John Cato, his brother, was forced to swim across a very rapid channel of water running at about eight knots, to effect his escape. Walter Brunton and his family had to be liberated by boat from their imprisonment in their house opposite Cato's Creek, since the floor was already under more than half a metre of water, but during their rescue one of the boats was swamped and Charles Povall nearly drowned.

The river began to flood Durban at about 4 a.m. on Tuesday, bursting over the sand flat on which the town was built and making its way to the inner bay. By 7 o'clock that morning it had risen eight-and-a-half metres above its average, which was the greatest height to which the river rose during the storm. Union Street at the east end of the town became an extensive sheet of water as far as the Point, and the floors of buildings were covered with water to various depths. The bridge over the watercourse at the Point — and even the road for a considerable distance on either side — was totally destroyed as the enormous quantity of fresh water poured into the Bay.

While the town was being threatened with destruction, all business was suspended, since one could only proceed from one part of the town to another on horseback. Brick kitchens fell in, houses were made uninhabitable, their furniture and goods afloat, and from the neighbouring hills it looked as if Durban was planted in water. In Pinetown nearly all the chimneys were blown away, many gables collapsed and the church tumbled down.

Outside Durban the torrential precipitation filled the hollows in the hills, and sent landslides of earth and rock, mud and water, thundering into the valleys. The Reverend Lewis Grout, the American missionary who



British immigrants landing at the Point.

(Photograph: Natal Archives C4744)

ministered to the Zulus from about 1844 to 1859 at his station west of Inanda, saw one of these avalanches from the safety of his window. He concluded that the flat-topped mountains of the colony were so continually being reduced by these deluges that 'coming ages will find these tabular summits of sand-stone disappearing one after another; and the flat-topped mountains reduced to a round-topped hillock'.⁵ At Inanda, where the American Presbyterian minister, Reverend Daniel Lindley, resided, a similar rockfall occurred after heavy rain over two or three days, in which the whole mountainside crashed to its base in a mighty mass of boulders and water.

In April 1856 the Tongaat River also came down in flood, rising nine metres above its normal level and devastating the Tongaat Sugar Estate; it carried away the gable end of a building, as well as a large quantity of yellowwood and tallow which had been collected, and of course sugar cane. At the mouth of this river the bodies of four Zulus were found who were presumed to have drowned in the Umvoti River and been washed down the coast. The latter river rose nearly five metres, swelled by scouring floodwaters which broadened it to four times its usual width, and spread a bed of sand well over the metre thick upon the neighbouring pastures.

Borne upon these sweeping floods in the Umgeni and other rivers were whole islands of grass, trees, bushes, sugar cane, and other flotsam, as well as animals, both dead and alive. 'Upon one rather large tuft of grass and entangled roots were some fowls and turkeys, also various remnants of houses and sheds', we are told.⁴

The embellishment of anecdotes and alteration of facts is nothing new. Commenting upon the floods of 1856, a report of 1960 assures us that 'it was noticed, among other things, how a big elephant struggling futilely in the raging current and trumpeting loudly, was swept helplessly out to sea by the

flood waters of the Umgeni River'.⁶ Much earlier, on 18 April 1856, the story had appeared in the Press to the effect that 'during the height of the flood a large elephant floated past the mill, sounding its trumpet fiercely. It is believed to have escaped into the adjacent Berea bush'.⁷

To correct this latter erroneous report, the man who witnessed the incident gave the facts to the paper next day. He was George Potter, already mentioned as the manager of the Springfield Sugar Works on the Umgeni River, and he wrote:

Whole islands of grass floated past, and as an interlude about midday, in sportive glee, a huge sea cow (not an elephant) passed within thirty yards of the mill down the rapid current which in answer to the Kafir shouts looked askance, raised its head and travelled on; since which several others have been seen on *terra firma*.⁴

After the floods these hippopotami were heard nightly near the Umgeni making what were described as the most horrible noises, and seemed to be there in great numbers.

On the sixteen-kilometre stretch of beach between the mouths of the Umgeni and Umhlanga Rivers 200 drowned oxen were deposited — together with pumpkins, roots, buck, jackals, trees, reeds, and half the Umgeni pont — by the action of the breakers and the wind. North of Durban, both the Umhlanga and Umhloti Rivers were impassable (and no doubt all others even further north), having surged over their banks to destroy dams and carry away arrowroot, sugar cane and potato crops. At Verulam, then a white village, where the Umhloti rose during the storm to a height of nine metres, houses sustained serious damage and the Wesleyan Day School Room was rendered unfit for use, while the level ground bordering upon the river was almost covered with sand to a depth of up to one-and-a-half metres.

The storm had extended south of Durban, too, and inland as far as Pietermaritzburg, though the rainfall in that city amounted to about 40% of Durban's total. (It is interesting to note that in those days Durban was referred to as 'the Town' and Pietermaritzburg as 'the City'). The Vanderplank Bridge in the city was reduced to a very dangerous state by the swollen waters of the Dorp Spruit, while the bridge over the Umsindusi River was destroyed. Business may have been seriously hampered by the effects of the deluge, but at least one important person did not give in easily: 'The indefatigable postmaster, Mr [Edmund] Tatham, succeeded in crossing the river in an india-rubber pont, belonging to Dr Colenso, and trudged his way to Uys' Doorns, in quest of the mail bags'.⁸ On 23 April Mrs Joseph Burrup of the city was drowned while attempting to cross the fast-flowing waters of the Umlaas River, her horse being swept into the middle of the river where she lost her balance and sank, in full view of her husband and friends who were accompanying her.

Still further inland, in the upper reaches of the Umgeni River at Howick, the mountain torrent carried away both bridges over the river, and with them went 'the sanguine expectations of the disappointed inhabitants of the devoted village', as it was so quaintly phrased.⁹ The committee responsible for the planning of the iron bridge above the Howick Falls was most severely taken to task for its poor design and ill-suited site, because 'its fate was long ago predicted, by all who were acquainted with such matters, and the

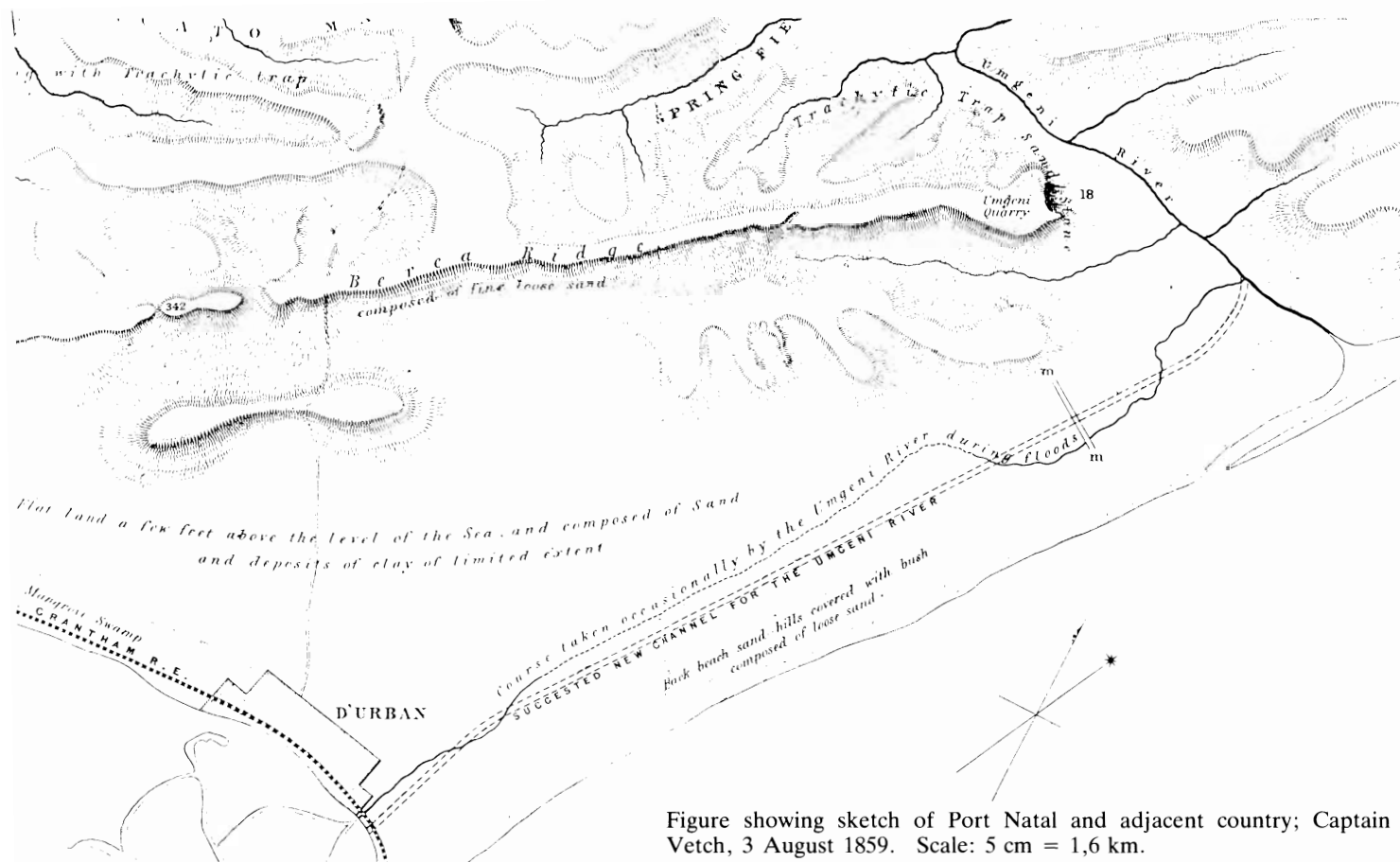


Figure showing sketch of Port Natal and adjacent country; Captain Vetch, 3 August 1859. Scale: 5 cm = 1,6 km.

committee were advised to alter the design; but they were either too wise to be taught, or too obstinate to retract, they still persisted in carrying out their foolish design and behold the consequence'.⁹ Not only had the two buttresses been wrecked, but a large portion of the one on the south side had gone straight over the Falls, and only the middle pier stood undamaged. The bridge at Alleman's Drift (at the site of the present road bridge immediately below Midmar Dam) was the other casualty.

Durban's residents realised that they had two things to be thankful for: that the heavy rains occurred at neap tides, which meant that the river discharge into the sea was more rapid than would otherwise have been the case, preventing the complete destruction of their town; and that the need had been demonstrated to prevent the building of houses on the river banks and in low-lying situations. Though this was recognised and stated at the time, the lesson was not well taken, and this has been a recurrent problem in most subsequent floods even to the present.

The need to bridge the Umgeni River at the coast had been felt before this great flood of 1856, and late in the previous year or early that year, John Milne had been called upon to prepare a plan and specification for such a bridge at a place called George's Drift, near Durban. He had measured the width of the river at this site, and had found it to be 63,5 metres, with the water low at the time. He noticed that the banks appeared not to have been scoured away for many years, and drew the conclusion that the occasional barring up with sand of the river outlet to the sea had slowed down the rate of flow in the estuary of the watercourse, permitting it to overflow its banks at periods of heavy flow.¹⁰

A member of the Admiralty, James Abernethy, wrote of the Umgeni River in 1859 that 'it appears to have overflowed occasionally, and to have sent its waters into the Harbour . . . I think it very possible that in ancient



Sketch of West Street, Durban, in the 1850s.

(Photograph: Natal Archives C4756)

times the course of the Umgeni to the sea was through the Harbour',¹¹ but he noted that it now discharged into the sea eight kilometres north of Durban's harbour.

Immediately after the storm of April 1856 John Milne returned to the bridge site to examine what damage had occurred to the river surrounds, and found that the banks had been torn away on both sides so that the channel was now 215 metres wide, or more than three times its original breadth. He also noted that the sand at the bottom of the river had been scoured away, and instead, large boulders mixed with clumps of clay protruded above the blue waters. The river, because it had forced a passage through the sand-dunes to the sea, now formed a tidal estuary in which the tide rose and fell a metre or two, and at George's Drift it had risen by almost nine metres above the level of high water at spring tides. He deduced, further, that the velocity of the current at its greatest must have approached eighteen knots, and observed that the straggling cotton trees which had grown on the broad flats on the Durban and Verulam sides of the river had been uprooted and washed away, in much the same way that the wild fig trees vanished this year (1984) from the Mfolosi River surrounds.

Captain Vetch drew a sketch of the Port Natal area in 1859 to outline his proposal for a new channel to be taken by the Umgeni into the Bay, and this is shown in the figure appended. The intention was to alleviate the risk of inundation of Durban at times of severe rains, it having been already noticed that in less than three years after the scouring flood of 1856 the mouth of the river was again silting up, posing a considerable threat to the seaport.

The raging sea-gale of April 1856 had brought 691,1mm rain to Durban in 66 hours, and a total of 706,9mm in five days.¹² The 24-hour readings for three consecutive days had been:

Monday morning, 14 April 189,5mm
Tuesday morning, 15 April 303,0mm
Wednesday morning, 16 April 198,6mm

Is this the highest precipitation ever to be recorded at Durban? The table below shows that over the 130 years 1855-1984, for which figures are available, those of April 1856 are substantially higher for all periods above a one-day fall.

Rainfall Period (days)	Rainfall for April 1856 (mm)	Heaviest Rainfalls 1855-1984			1856 Fall greater by:
	Date	Type of Storm	Rainfall (mm)	(%)	
5	706,9	March 1866 ¹³	sea-gale	390,4	81,1
4	703,3	December 1855 ¹⁴		370,6	89,8
3	694,7	October 1917 ¹⁵	sea-gale	428,5	62,1
2	501,6	June 1935 ¹⁶	sea-gale	419,1	19,7
1	303,0	May 1905 ¹⁷	sea-gale	448,3	
		January 1953 ¹⁸	thunderstorm	330,5	
		June 1935 ¹⁶	sea-gale	323,8	

TABLE SHOWING RAINFALL RECORDS FOR DURBAN FROM PERIODS FROM 1-5 DAYS.

It is clear from the above table that storms accompanied by gale-force winds from the south and south-east are the most devastating for the Durban region. Further north, in KwaZulu and Mozambique, it is unquestionably those caused by cyclones that are known to be the most punishing. In March 1925, for instance, cyclone-induced storms raged over the northern coastal regions of Natal and Zululand, bringing no less than 1 187,2mm rain to the Mfolosi catchment over nine days, of which 320mm fell in one cataclysmic period of eleven hours²⁰.

Natal is not far from those tropical latitudes where the south-easterly trade winds prevail, and it may be that the presence of several low-pressure cells to the south of the African continent occasionally causes these winds to undergo a southerly shift, to blow upon the Natal coast and augment the already strong south-easterly sea-breezes which are a feature of our climate. The meteorologist Robert James Mann, who was living in Pietermaritzburg from 1858, noticed that sea-gales were almost invariably associated with a high barometric column and a cold, condensed and therefore relatively heavy, state of the atmosphere²¹. The occurrence of this southerly shift of the south-east trade wind belt, in conjunction with the passage of a cold front from the south-west, is the probable combination which results in these destructive winter storms along our coast. A westerly shift of the whole trade belt may well be the cause of storms of a cyclonic nature striking the African continent.

REFERENCES

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- ² *Ibid.*, 11 April 1856.
- ³ *Daily News*, 14 January 1953.
- ⁴ *Natal Star*, 19 April 1856.
- ⁵ Revd L. Grout, *Zulu-land; or Life Among the Zulu-Kafirs of Natal and Zulu-land, South Africa* (London, 1860; new impression 1970).
- ⁶ South African Weather Bureau, Newsletter no. 139, October 1960, pp. 21-23.
- ⁷ *Natal Mercury and Advertiser*, 18 April 1856.
- ⁸ *Natal Witness and Agricultural and Commercial Advertiser*, 18 April 1856.
- ⁹ *Ibid.*, 25 April 1856.
- ¹⁰ J. Milne, Report on the Cause of the Fall of the Queen's Bridge, *Government Gazette*, no: 1184, 20 July 1869, pp. 244-246.
- ¹¹ J. Abernethy, Report on the Proposed Harbour Works at Port Natal, *Natal Blue Books*, Separate Publications 1853-1871, 3 August 1859.
- ¹² *Natal Star*, 16 & 23 April 1856.
- ¹³ *Natal Mercury and Advertiser*, 22 November 1880.
- ¹⁴ *Ibid.*, 14 & 21 December 1855.
- ¹⁵ *Natal Advertiser*, 29 October 1917.
- ¹⁶ *Ibid.*, 15 June 1935.
- ¹⁷ Storm Damage, Umbilo Valley, *Government Gazette*, no. 3486, 18 July 1905.
- ¹⁸ University of Natal, Department of Agricultural Engineering, computerised rainfall records for Botanical Gardens, Durban 1871-1981.
- ¹⁹ *Natal Advertiser*, 13 June 1935.
- ²⁰ *Ibid.*, 21 March 1925.
- ²¹ R.J. Mann, 'Contributions to the Meteorology of Natal — Observations taken at Maritzburg', 1878, *Quarterly Journal of the Meteorological Society*, IV (28) 1878, pp. 173-185.