

HARDEN UP

QUEENSLAND

CASE STUDY: Cyclone Sigma, 1896

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A tropical cyclone *Sigma* (named by Wragge) passed just to the northeast of Townsville and the barometer at Townsville dropped to 988hPa. The cyclone then moved down the coast towards Rockhampton. Rainfall from effects of the cyclone close to the coast generated very heavy rain overland. There were Twenty three deaths and three missing in Townsville and Central Queensland.

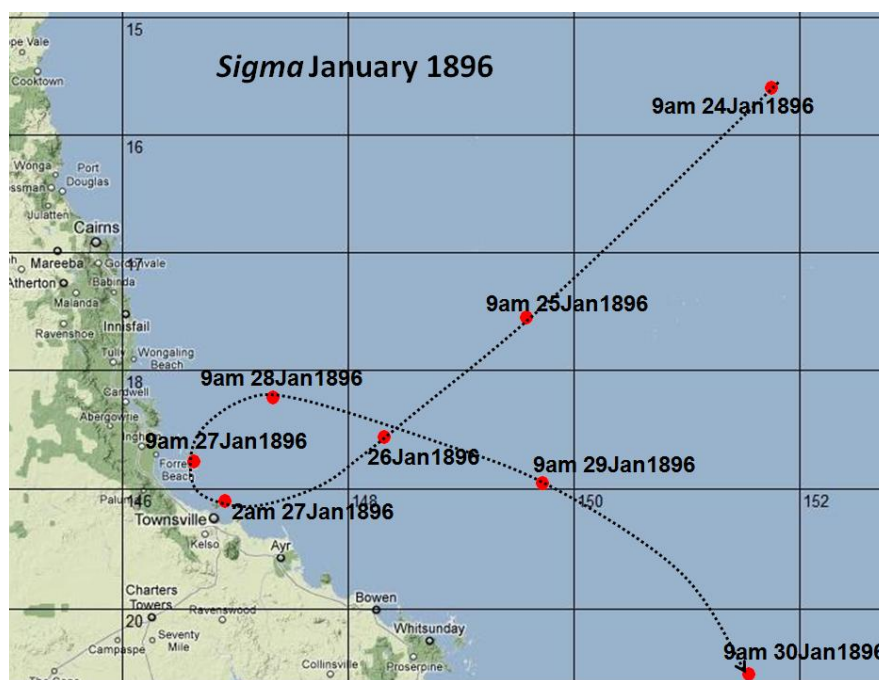


Figure 1 Track of tropical cyclone *Sigma*.

Impact in Townsville

- Many hundreds of houses were wrecked, and there was consequently a great demand for carpenters and plumbers.
- Ten vessels were wrecked in the harbour. These were the *Alexandra*, *Ada Dent*, *Star of Hope*, *Lalla Rookh*, *Nebo*, *Florence Elliott*, *Heather Belle*, *Presto*, *Dugong*, *Nautilus*, two barges, and the steamer *Ellen*.
- Fences were laid flat and verandas stripped off houses.
- The bridge over Ross Creek collapsed. Trees 6 feet in circumference were blown down.
- Seas were enormous and 510 mm of rain fell in Townsville during the cyclone.
- Floods and storm surge flooded the lower parts of Townsville with over 1.8 m of water. 3 miles of suburbs became an inland sea with large waves breaking on the banks.
- Seventeen people drowned in Townsville as a result and one sailor was killed.
- Five drowned and three missing in Central Queensland floods.

- The breakwaters in the harbour were badly damage by the seas, and the baths completely swept away.
- The Cape Cleveland Light keeper's house was unroofed and the boat-shed was damaged.
- At the Cape Pallarenda Quarantine Station, two of the buildings were carried off their blocks, and half of the wharf was swept away.
- The School of Arts was wrecked, the Imperial and Criterion Hotels were unroofed, and hardly a house has escaped damage.

Sea damage

During Saturday afternoon (25 January) a very high sea was running, and as it rose the waves broke over the eastern end of the jetty and impinging on the head of the western breakwater, at times covered it with white foam. Even inside the harbour the waves were of a dangerous size and strength. Between 6 and 7 in the morning on Sunday the Bay presented an alarming appearance; huge waves beat upon the beach and frequently overwhelmed 500ft. to 600ft of the eastern jetty, pouring over the structure into the harbour in irresistible volume. At times it was difficult to trace the western breakwater, the mighty and continuous waves almost entirely submerging it.

Observations from Townsville

- 25 January 1896 2pm a gale at Townsville from ESE with heavy rain and a barometer reading of 1007.0hPa and at 5.30pm the bar dropped to 1005.3hPa. During the night the wind veered to the SE and increased in violence.
- Sunday morning 26 January a heavy SE gale was blowing with rain. During the day the wind increased to hurricane force and the bar fell all day as below:-
9am 26 January 1002.8hPa; 11am 1001.7hPa; 2pm 997.6hPa; 3pm 996.9hPa; 4pm 995.5hPa; 5pm 992.8hPa; 6pm 991.8hPa; 7pm 991.7hPa; 8pm 991.6hPa; 9pm 991.3hPa. At 9.45pm the wind veered suddenly to E and appeared to decrease a little in violence.
The bar then rose at 10pm 993.3hPa; 11pm 26 January 993.8hPa.
- At Midnight the bar fell to 992.5hPa and at 1am 27 January was 991.9hPa and the wind increased again and continued to increase.
- At 2am was the lowest bar of 990.9hPa and the wind still was increasing and beginning to veer towards the NE.
- At 3am some of the squalls blew with terrific force and the bar was 991.1hPa At 3am wind was starting to veer and come from the NE the bar was 991.1hPa; at 4am 991.6hPa; at 5am 992.3hPa and at 6am 998.2hPa.
- The wind was from the NE at 9am 27 January and the bar continued to rise and at 2pm 27 January it was 1001.7hPa; at 9pm was 1004.8hPa.
- All day the wind came from the NE with heavy rain squalls.
- In another part of town the lowest bar was 988.5hPa

Rainfall

Rainfall 24hour from (Qld convention prior to Federation) 9am at the date shown:-

Innisfail

110.7mm 24th 77.5mm 25th 3.8mm 26th 29.7mm 27th 15.7mm 28th 2.59mm 29th

Lucinda

0.0mm 24th 14.5mm 25th 63.5mm 26th 114.3mm 27th 43.2mm 28th 27.9mm 29th

Townsville Pilot Station

43.7mm 24th 56.6mm 25th 184.2mm 26th 69.9mm 27th 73.4mm 28th 24.9mm 29th

Burdekin Shire Council

28.4mm 24th 28.7mm 25th 266.7mm 26th 21.6mm 27th 29.7mm 28th 20.8mm 29th

Bowen

63.5mm 24th 35.1mm 25th 189.2mm 26th 180.8mm 27th 57.2mm 28th 98.6mm 29th
Mackay
0.0mm 24th 23.4mm 25th 19.1mm 26th 52.1mm 27th 29.2mm 28th 31.0mm 29th

Central Queensland Rain

Collaroy 98 km S of MACKAY 48.3mm 26th 7.6 0.0 43.2 362.0mm 30th 96.5mm 31st
Marlborough 55.4mm 28th 275.3 233.9 109.5mm 31st
Woodlands 41km NNE of Rockhampton 58.7 57.4 22.1 176.8 302.5 131.3mm 31st
St Lawrence 101.6 356.9 381.0mm 31st

Haughton Valley 51 km ENE Charters Towers 34.8 459.7mm 26th 162.8mm 27th
Tooloombah 117km NE of Blackwater 70.9 297.2 309.9 81.331st

Floods

Hughenden. The Flinders is over the banks, and also over the banks at Richmond.

Georgetown.

The heaviest rain that has been experienced in this district for many years fell from Monday 27 till Wednesday 29 last. The Etheridge River was a banker for two days, which prevented the Herberton coach leaving until today, while the Croydon coach only arrived yesterday. It is reported that the splendid dam at the Big Reef has been carried away. This was the best dam in the district, and its loss will mean a serious blow to the mining industry.

Collaroy Station

Had very heavy rain and telegraph lines were under up to 10 feet of water. Water here drains into Connors then Isaac River.

Fitzroy System

On January 30 the river rose suddenly and there was a flood in Rockhampton with the wharves covered by 6feet 6inches of water. This flooding was due to local rainfall and floods surround Rockhampton.

4 February -The Dawson was over the top level of the flood of 1890, and the Nogoia was still rising. The Mackenzie was also in heavy flood.

The Clermont Railway is still blocked to traffic, but the flood waters have now gone down. Central Railway is confined to the carriage of mails and passengers, owing to the flood In the Dawson and Comet. At the Dawson alone eight miles of boating has to be done.

Clermont February 4. Constable Quinn drowned

February 5 -The river here yesterday rose 8in., and is now 3ft. 4in. from the mark of the Flood of 1890. At Yaamba this morning it was still rising, and only 1ft. 8in. From the top level of the flood of six years ago.

At 7 o'clock this morning the Dawson was 5ft. 6in. above the 1890 flood, but was falling an inch an hour.

Advices were received here yesterday of the drowning of George Hatfield, manager of Yatton station, near St. Lawrence, his brother James, and. of a Stockman named Con McLean at Clarke's Creek, on Wednesday last, and of a man named Harry Hail, at Halloran farm, close to St. Lawrence.

Clermont, February 5. A second flood occurred here yesterday, although not a very high one. The weather is still cloudy, and the creek is rising rapidly. Three men are reported as missing in the country. 5 deaths and 3 missing.

6th February: Major flood at Rockhampton. Height 8.6m.