

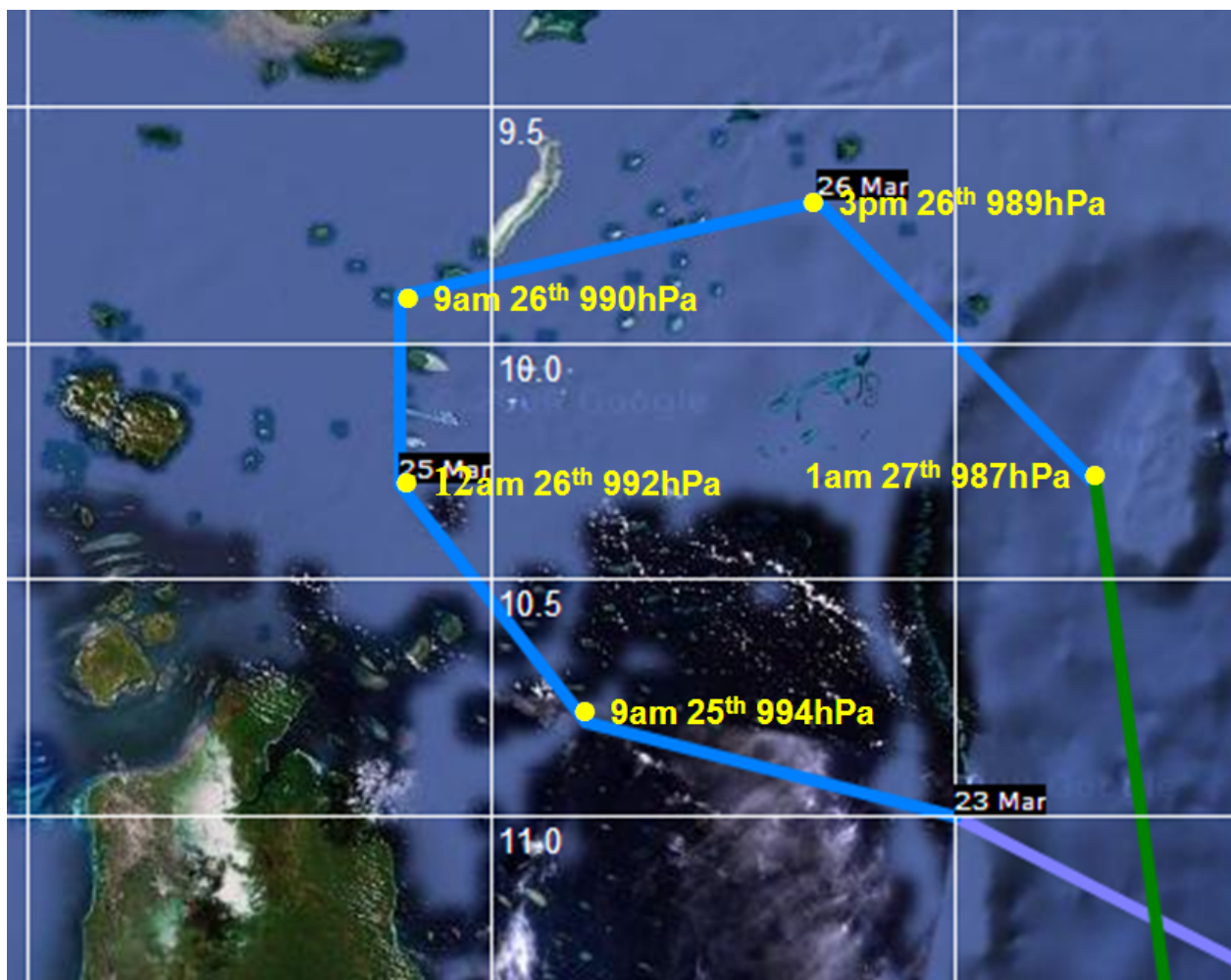
## Douglas Mawson Tropical Cyclone, 1923

By Mr Jeff Callaghan

Retired Senior Severe Weather Forecaster, Bureau of Meteorology, Brisbane

**23-25 March 1923.** This was the so-called *Douglas Mawson* cyclone as it sunk that vessel with the loss of 20 lives in the Gulf of Carpentaria where it also generated a 7 metre storm surge at Groote Island. The track below shows its passage through the Torres Strait Islands it may have been much more intense than indicated.

The eastern islands of Torres Strait (usually cyclone free) were badly damaged. Darnley, Coconut, Mabuiag and Murray Islands suffered much damage - houses unroofed, trees down, gardens damaged, luggers dismasted and Darnley settlement was virtually destroyed and banks of living coral 4 to 5 feet high were dashed up by the waves .

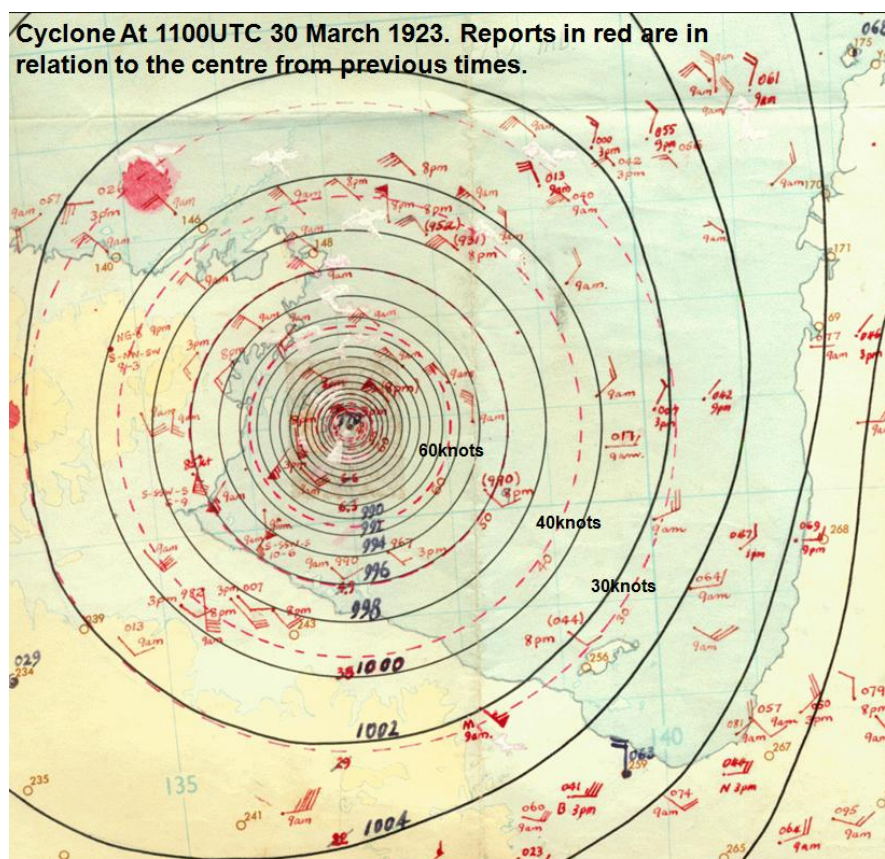


Track of *Douglas Mawson* cyclone in March 1923

This cyclone tracked directly from Coen towards Groote Eylandt at 5 to 6 knots. The abnormal sea conditions in the Gulf led to the loss of a well-found Gulf steamer, the *Douglas Mawson*, with the loss of 20 lives. Contributing to the large waves was the huge size of the cyclone's circulation (Figure 1). An accurate storm surge height was obtained from the Mission house on Groote Island (see Figures 2, 3 and 4). At 9am 30<sup>th</sup> March 1923 they recorded 6.4 inches (163 mm) of rain over the previous 24 hr. At 4pm the wind turned southerly and increased to force 8 and reached hurricane force southwesterly at 6pm with torrential rain. At this time flooding combined with storm surge caused the water to reach the top of the river bank (12 feet above both the mean tide level and the predicted tide level). By 9 pm 30<sup>th</sup> the roof and the front wall blew off and the rain gauge overflowed (more than 10 inches of rain). At 10 pm the east wall was blown out and the water reached up stairs (20 feet above mean tide level and 18.5 feet above predicted tide. At midnight the water level peaked at 23 feet above the mean and 21.5 feet above that predicted. The wind then turned westerly with stronger gusts. At 4 am 31<sup>st</sup> the building collapsed as the water receded. At 6am the wind was down to gale force and the water level was 15 feet above mean. The ground became visible at 10 am. Few trees were left standing.

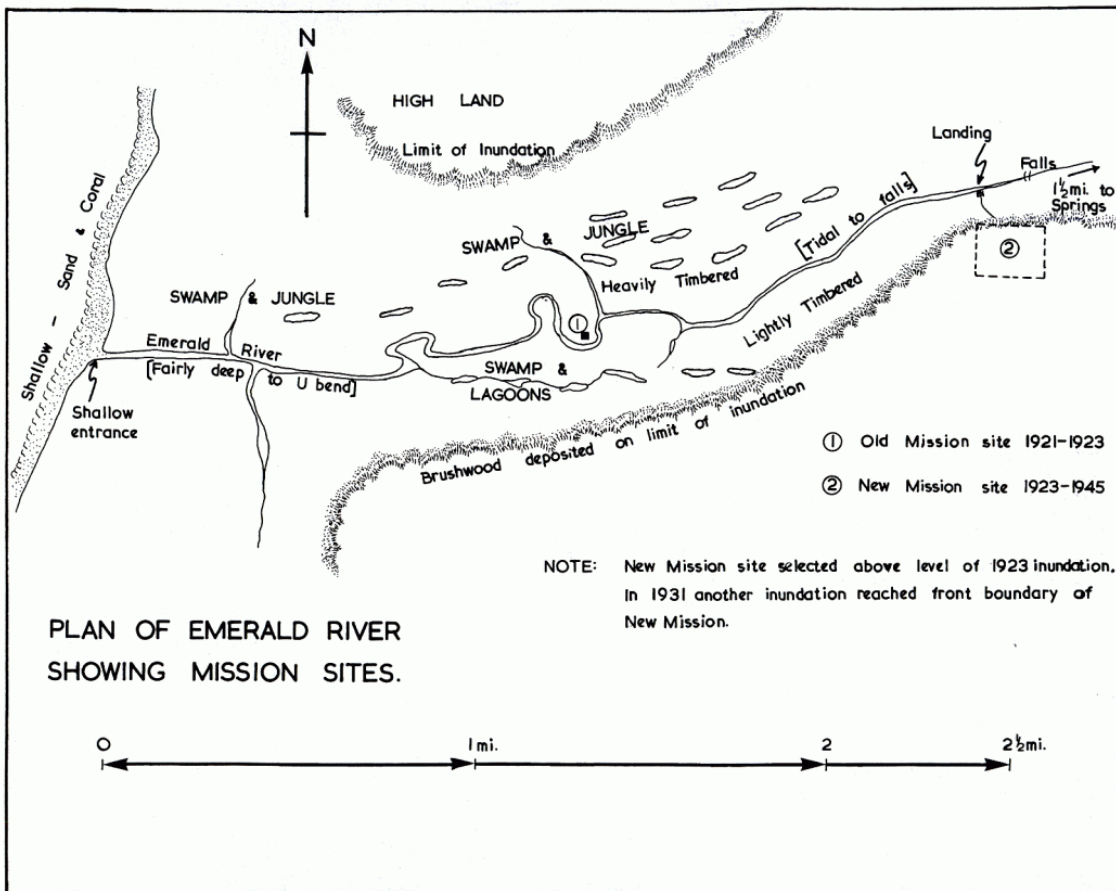
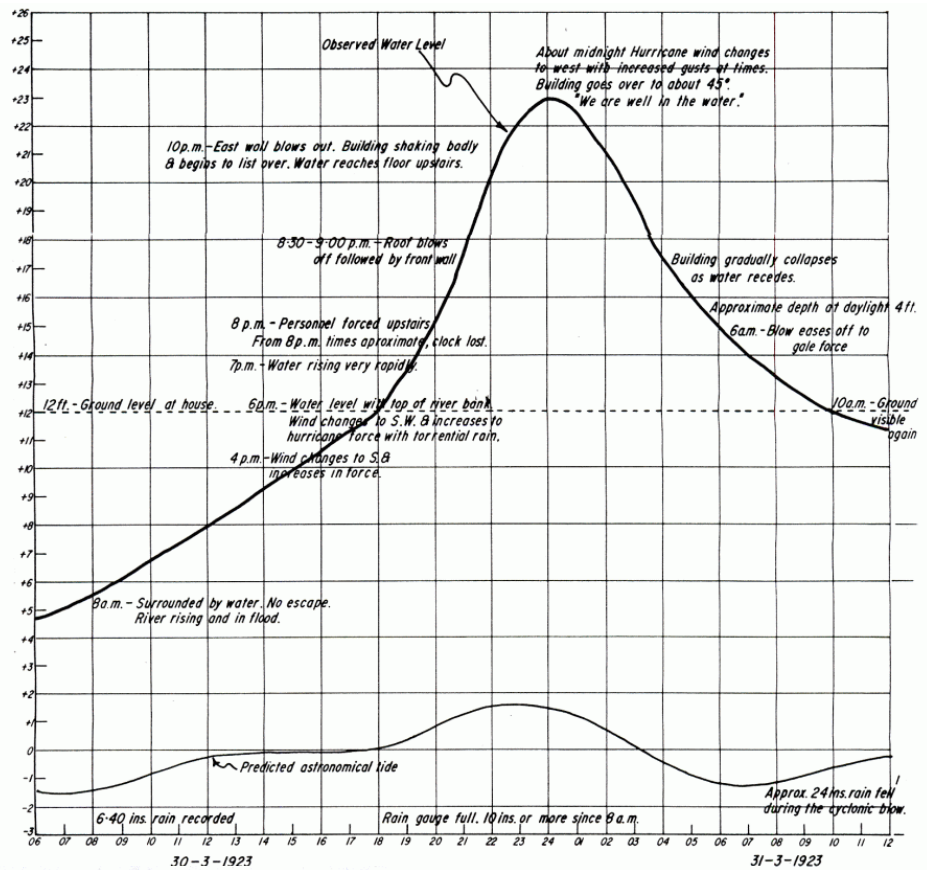
At Burketown a storm surge of 9 feet was reported and at Pt McArthur a storm surge of between 18 feet and 8 feet was reported.

The flooding by the 21.5 feet storm surge at the mission house at Groote Eylandt (Figure 5) was ascribed at the time to flooding in the Emerald River (Figures 3 and 4). However the catchment of this stream is so small that a flood of this magnitude could not be sustained, particularly as the Mission was only 2 miles from the sea and surrounded by swampy country. Whittingham (1968) concluded that the sea level must have risen by something of the order of 20 feet or more above high water.



**Figure 1** Mean Sea Level Composite analysis of 1923 Douglas Mawson cyclone.

**Figure 2** Graph of storm surge 30/31 March 1923 on Groote Eylandt also showing rainfall and wind effects.



**Figure 3** Map showing the location of the mission house (1) in 1923





**Figure 4** Location of Emerald River on the southwest coast of Groote Eylandt.

#### Reference

Whittingham (1968) The 'Douglas Mawson' Tropical Cyclone of 1923. Appendix 1 Tropical Cyclones in the Northern Australian Regions For 1964-65 season 88 pages. Bureau of Meteorology