Newsletter
Volume 16, Issue 1
October, 2016

# Court orders on Byron Bay's coastal wars

*by Dr Kevin Roche*

Risk Frontiers had an opinion piece published in *The Australian* on 23rd August, 2016 that looks at the recent conclusion of two Supreme Court cases concerning Byron Bay property owners after almost 10 years of court activity.

On the back of receiving this opinion piece, the newspaper used it as the basis for a broader front-page story.

http://www.theaustralian.com.au/opinion/shifting-sands-for-councils-on-responsibility-for-past-projects/news-story/74910f502ed45a20de2eb5cc4ec307fd

## Shifting Sands for Councils

Two successful cases against Byron Shire put onus on local authorities for past works.

Byron Bay, home to one of Australia's most iconic pieces of coastline, has long been the poster child for disputes in the coastal zone.

In recent times, the newly proposed NSW Coastal Management Bill and the recent east coast low that impacted Sydney's Northern Beaches has drawn much of the attention in the coastal space, but this might not be the case for much longer.

After almost 10 years of prolonged court activity, two Supreme Court litigation cases involving the Byron Shire Council were finally resolved by Court orders last week. Both of these cases relate to engineering works on the coast. Despite no admission of liability by Council, both involved substantial financial settlements to the plaintiffs and orders against Council in one of the cases.

The first case concerned a group of Belongil Beach property owners who were seeking compensation for financial loss in relation to the Council's historical works in front of the Jonson Street car park. They were awarded $2,750,000 including costs.

The second case involved another group of Belongil Beach property owners who successfully claimed an undisclosed amount of compensation related to injunction orders that were won in the Land and Environment Court in February 2010 following the May 2009 storm event.

According to Angus Jackson from International Coastal Management, the cause of all the problems in Byron dates back to 1964, when the structure was first built by the Council. In 1975 the initial structure was then added to with finger groynes, further trapping sand that benefited the main beach whilst starving Belongil Beach.

Jackson states "the artificial headland and groynes at Jonson Street that were constructed by the council were designed to not only protect the carpark but also to widen Main Beach on the updrift side. The groyne effect causing erosion along the beaches on the downdrift side (Belongil) has been well documented since at least the 1978 Public Works Department report. "

Larger beach widths provide natural protection from storm events. Evidence filed in the court indicated that the impact of the Jonson Street engineered structure was significant enough to cause the loss of more than 20-25m of beach width.

*[continued page 4]*

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# **Joining the dots:** William Dampier the navigator, the 17th century eruption of Ritter Island, the conception of Jesus Christ, minor errors in the Smithsonian Catalogue of Volcanic Eruptions, and the United Kingdom tax year.

*From Risk Frontiers' own agent provocateur, Emeritus Professor Russell Blong.*

William Dampier – one-time buccaneer, outstanding navigator, author of popular travel books, superb recorder of natural phenomena and a Captain in His Majesty's Service – while passing through an area now known as Dampier Strait off the North Coast of Papua New Guinea wrote in the log of *The Roebuck* on the 24th March 1699:

> *6° 16'S, 3° 38'W. Sunday. Clear fair weather with pleasant gales. Variation by Amplitude, 8° 50' East*

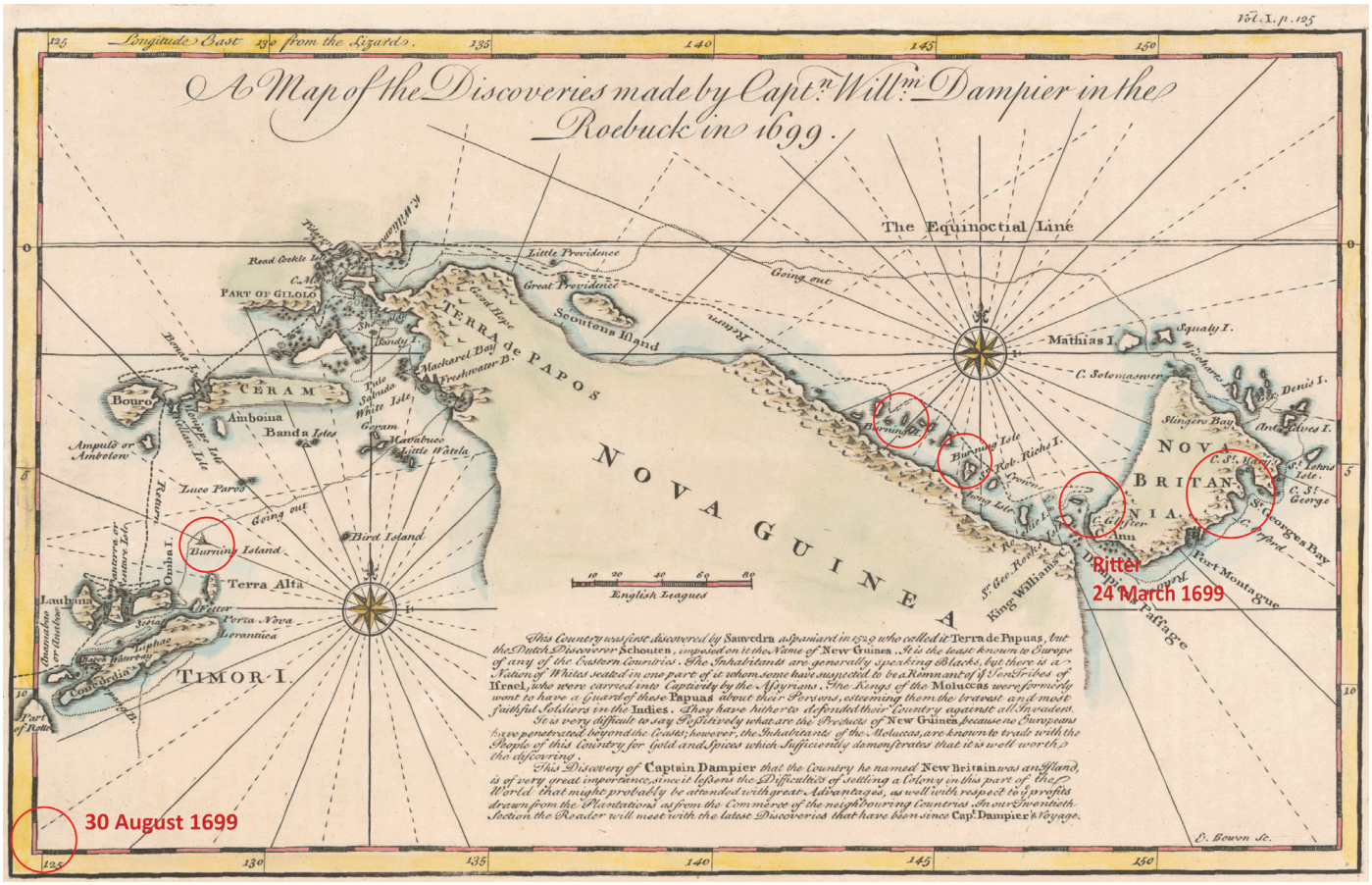
On the following day the log entry reads:

> *6° 00'S, 4° 20'W. The Burning Island NNW ½ W. At 10 at night saw some considerable distance from us the blazing of a Burning Island. The Westernmost had in it seven small islands which were low and woody, the other had the Burning and one more, through this we steered gaining a passage being in breadth 7 leagues.*

This was the first recorded eruption of Ritter Island. The latitudes given are accurate to within a few minutes of arc. The longitudes are given as west of Cape Gloucester, the westernmost tip of New Britain; the location and description clearly fit Ritter Island which is located at 5.52°S, 148.121°E.

The Smithsonian Institution Global Volcanism Program (GVP), the global bible for all volcanic eruptions in the last 10,000 years, records the start date of the eruption of Ritter as 24 March 1700 (http://volcano.si.edu/volcano.cfm?vn=251070), just a year less a day different from the date in *The Roebuck*'s log.

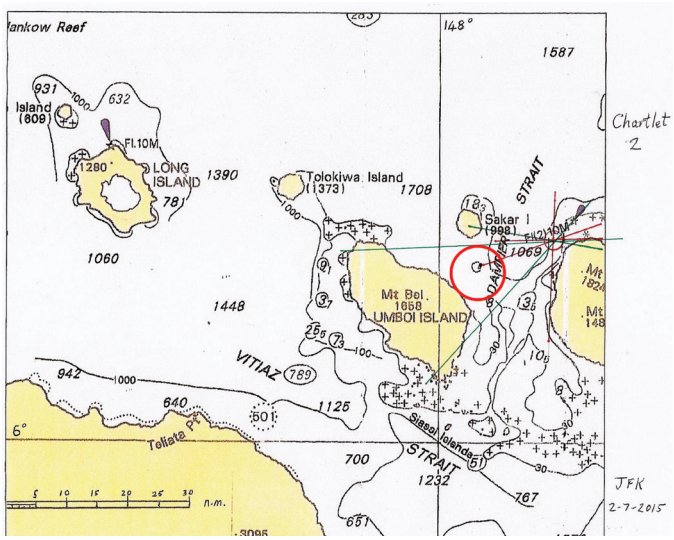

One of Dampier's three profiles of Ritter Island in eruption (from Williamson, 1939 showing Dampier's Table XIII, No 3.)




A 1744 version of Dampier's map described as Bowen, Emanuel, "A Map of the Discoveries Made by Captn. Willm. Dampier in the Roebuck in 1699." Copperplate map, with added color, 19 × 31 cm. From John Harris's *Navigantium atque itinerantium bibliotheca,* or, *A Complete Collection of Voyages and Travels* (London, 1744). [Historic Maps Collection]. Except for the circle labelled 30 August 1699 the circles locate 'Burning Isles' identified by Dampier. [http://libweb5.princeton.edu/visual_materials/maps/websites/pacific/dampier/dampier.html]. The National Library of Australia copy of the Bowen map is dated 1767 [http://nla.gov.au/nla.gen-an6520463-1-1-1-s124a].

Let's deal with the day first. *The Roebuck*'s log, like all ships' logs at the time, records the noonday position of the ship and a record of Remarkable Observations for the previous 24 hours. Thus, Dampier's record of the Burning Island "At 10 at night" refers to 10pm on the evening of March 24.

Emeritus Professor John Kemp's (2015) reconstruction of Dampier's location when this profile was drawn is shown below. Bearings are shown in green. Ritter Island lies within a red circle.




However, the Roebuck's log also refers to the Burning Island on March 26th and 27th. Dampier's Remarkable Observations provide evidence that Ritter was in eruption for at least three days. On the 26th for example he wrote, inter alia, "*The Island burneth continually making a great noise, with an extraordinary high and furious blazes having between each motion very little space or time. It may be seen 20 leagues off, it is about 3 miles at the bottom so goeth up spiring to the top of a considerable height*" and continues with more great descriptions of pyroclastic density currents (see Johnson, 2013).

This continuation of the eruption the GVP fails to record.

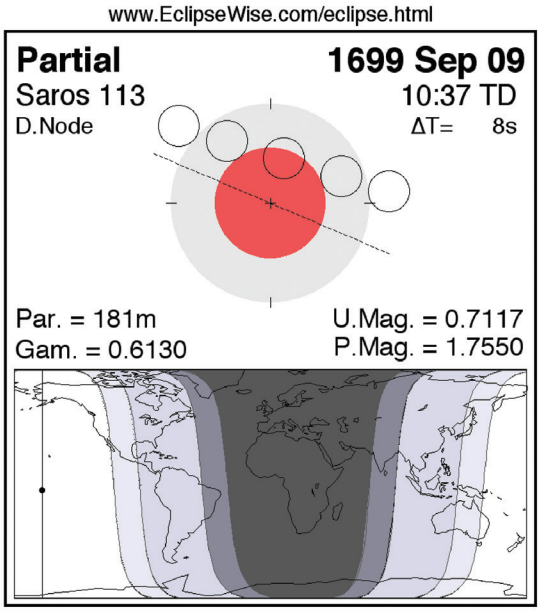
To figure out the difference in the year (1699 for Dampier, 1700 for the Smithsonian) we need to go back to the Roebuck's log. In fact, Dampier dated the 24th March as 1699, but the 25th March as 1700 – in other words, the first day of the New Year. This had been the official practice in England probably since 1155 and remained the norm until 1752 when 1 January became New Year's Day. The 25th March in many countries is Lady Day or, more formally, the Feast of the Annunciation, commemorating the day on which the Angel Gabriel announced to the Virgin Mary that she would conceive a child who would be Jesus Christ, the Son of God. That is, Annunciation Day is exactly nine months before Christmas Day (https://regencyredingote.wordpress.com/2010/09/03/the-importance-of-lady-day-in-the-Regency-Calendar). Lady Day was also the start of the legal year, and close to the northern hemisphere vernal equinox (20 March – when the length of the day and night is equal) or the beginning of spring and a suitable day for landowners and tenants to initiate year-long contracts (https://en.wikipedia.org/wiki/Lady_Day).

This indicates that the Smithsonian catalogue is quite correct, in modern usage, in changing the year of Dampier's record of the eruption of Ritter from 1699 to 1700.

But let's go back a bit. Dampier stated that Ritter erupted on the evening of the 24th March 1699. Seven months earlier, on the 30th August 1699 to be precise (yes, this is correct!), the Roebuck was off the coast of Western Australia. In his 1703 book, *Voyage to New Holland,* Dampier wrote:

> *The 30th day being in latitude 18 degrees 21 minutes we made the land again, and saw many great smokes near the shore…. This evening we saw an eclipse of the moon, but it was abating before the moon appeared to us; for the horizon was very hazy, so that we could not see the moon till she had been half an hour above the horizon: and at 2 hours, 22 minutes after sunset, by the reckoning of our glasses, the eclipse was quite gone….*

These days it is easy to consult a lengthy record of lunar eclipses and to determine that the only lunar eclipse around the 30th August 1699 in this area occurred on the 9th September, 10 days later than the day recorded by William Dampier. This discrepancy confirms that Dampier was using the Julian calendar, rather than the Gregorian calendar.




***Thousand Year Canon of Lunar Eclipses***
©2014 by Fred Espenak

In October 1582 Pope Gregory XIII introduced the new calendar which corrected the length of a year by 0.002% and restored the time of the vernal equinox (and Easter) to the time of the year in which it was celebrated when introduced by the early church [https://en.wikipedia.org/wiki/Gregorian_calendar]. While Catholic countries introduced the Gregorian calendar promptly, other countries lagged behind, with the later the introduction, the larger the discrepancy between the Gregorian calendar and the earlier Julian calendar. For example, when England swapped to the new calendar in September 1752 it was necessary to jump forward 11 days. The Julian-Gregorian conversion and a complete list of days on which the new calendar was introduced in various countries can be found at http://stevemorse.org/jcal/julian.html. A short selection of dates appears on the table on page 4 (from the same source).

Back to the eruption of Ritter that William Dampier recorded in 1699/1700. Dampier had the eruption in the log entry for 25th March, the first day of 1700 but as the eruption was noted at 10pm in the evening this really refers, in English dates of the time, as 24th March 1699. The Smithsonian Global Volcanism Program records this as 24th March 1700, but Dampier's record of an eclipse on 30th August confirms that this is a Julian calendar date. In modern terms we would more correctly record the first day the eruption was noticed as 3rd April 1700.

| Country | Last Julian Date | First Gregorian Date |
|---|---|---|
| Portugal and Spain | 04 October, 1582 | 15 October, 1582 |
| Great Britain & colonies | 02 September, 1752 | 14 September, 1752 |
| The Netherlands (Holland, N Brabant) | 21 December, 1582 | 01 January, 1583 |
| The Netherlands (Utrecht, Overjissel) | 30 November, 1700 | 12 December, 1700 |
| Alaska | 06 October, 1867 | 18 October, 1867* |
| Japan | 1873 | 1873 |
| Russia | 31 January, 1918 | 14 February, 1918 |

*Alaska skipped 11 days instead of 12 as it also changed to the other side of the dateline on the same day!

This change also indicates that the dates for all the other 'burning isles' circled in the first figure are also Julian dates. In itself these changes/errors are trivial, but it is not just an "English" or Papua New Guinean problem. For most of the 16th century records of south east Asian volcanic activity were sourced from (mainly) Portuguese explorers; 17th century exploration in this region was dominated by the Dutch and the English. As most Dutch exploration was carried out under the umbrella of the Dutch East India Company (VOC), and that was headquartered in Amsterdam in North Holland, presumably most Dutch accounts of eruptions used the Gregorian calendar from 1582, but many Dutch states/provinces didn't switch until 1700. In the northern Pacific, Japan moved to the Gregorian calendar in 1873 but Russia used the old calendar until the end of January 1918. Prior to 1867 when the United States purchased Alaska from Russia for roughly 5 cents per hectare, some of the eruptions listed in the GVP catalogue were presumably recorded by Russian sailors or settlers. But which calendar were they using?

Sorting out which dates in the Smithsonian catalogue are already Gregorian or by how much eruption dates are in error will not be a simple task.

Oh yes – the United Kingdom tax year now starts, not on Lady Day, but on the Gregorian equivalent, April 6th.

## References


R Wally Johnson, *Fire Mountains of the Islands – a history of volcanic eruptions and disaster management in Papua New Guinea and the Solomon Islands, (*Canberra, Australian National University ePress, 2013), 393p.

William Dampier, *A voyage to New Holland,* (1939 edition), J A Williamson (ed.) (London: The Argonaut Press).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*[continued from page 1]*

What makes these court orders so interesting and significant is that the statutory authority, in this case Byron Shire Council, did not receive legal impunity (exemption of liability) from its earlier actions from over 50 years ago. As Karen Coleman from King & Wood Mallesons, the lead solicitor on the Byron litigation cases since their inception, stated:

"The court case against the council was based on well-established legal authority in Australia that a Council has a duty to protect its residents from a danger it creates by prior use of its statutory powers, in this case the building of the wall to protect the town."

As part of the resolution, the Court has ordered Byron Shire Council to allow property owners to retain any existing protective works adjacent to the Belongil properties in their current form or as repaired. The property owners will now be in a position to submit applications that would enable them to undertake lawful protective works at their own cost under current legislation.

The Byron Shire Council's legal services coordinator, Ralph James, was quick to point out that, despite the significant changes to NSW State planning regulations within the Coastal Protection Act and State Environmental Planning Policy, "the resolution agreement does not provide the property owners with greater or different protection than currently exists."

While technically this might be correct the reality is far different. These court orders should now be recognised as a pre-existing legal duty that cannot be ignored by Council and should guide and inform all subsequent efforts to use their statutory powers, including the Draft Coastal Zone Management Plan for Byron Shire. These orders will effectively restrict the options that the Council has to exercise its statutory powers going forward.

On the one hand this has been a win for the property owners with their individual property rights being recognised by the Court in the orders it has made. The property owners had sued on the basis that the Council had a duty to protect the residents of Belongil Beach from the danger it had created. On the other hand, though, it highlights the complex legal issues that surround the coast and our continued infatuation with it.

As Karen Coleman stated, "this case concerned a legacy issue arising from the impact of the man-made structure protecting Byron's township. The impacts of that structure, according to our evidence, threatened a natural dune along Belongil that is 6,000 years old and which also protects the wetlands behind it. These aspects have been ignored in many quarters."

Last year the Land and Environment court declined to grant an interim injunction sought by a community action group because of the greater risk to the environment if the dune was allowed to fail.

At the coast we have a very complicated intersection of various aspects of the law, environmental policies and beliefs, social and recreational values and political will. We are not dealing with a pristine coastline – it's been severely impacted by development over many generations. We need laws that are adaptable and flexible enough to deal with these legacy issues without lengthy court cases, as these problems will not go away. People will continue to migrate to the coast, leading to increasingly large concentrations of population, property and infrastructure that may already be at risk to natural coastal processes and/or man-made impacts, as has been shown by recent events in NSW. This, in combination with potential climate change impacts, magnifies our vulnerability to changes in an inherently dynamic environment.


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