

Monday 31st July 2017

MINNAMURRA TO BOMBO

Party: Valerie Atkinson, Faye Bingham, Brian Everingham, David Noble, Peter Smith and Suzanne Wicks

Distance: About 8.5km

Grade: 2

Weather: Kind till about 11.00 and then steady rain set in and stayed, thereby making the rest of the walk to Kiama redundant.

The lazy start, at 9.30am, meant we saw even lazier locals enjoying the estuary before the rains arrived!



Now that does look relaxing, doesn't it? We could paddle from here across Minnamurra River to the delightful peninsula of land jutting south from Killalea State Park, scene of an earlier walk I led for NPA.



Three species of Cormorant on one sand bank





The light was magical





Minnamurra River rises within the Budderoo National Park on the eastern slopes of the Illawarra escarpment, west of the village of Jamberoo and north of Missingham Pass, and flows generally east, descending the 100 metres (330 ft) Minnamurra Falls. The river drains into the Jamberoo Valley surrounded by Stockyard Mountain to the north, Jamberoo Mountain to the west and Noorinan and Saddleback Mountain to the south. The mouth of the river lies immediately north of the Kiama suburb of Minnamurra at Minnamurra Point. The entrance is characterised by a small island just offshore from the mouth. The river descends 306 metres (1,004 ft) over its 23 kilometres (14 mi) course and that island is on the previous page. But while we were here on the Point we were distracted by an Australasian Kestrel.

The headlands did have the odd flower or two and I really did need a grass expert to tell me if they also have native grasses.



And it also had pleasant dog walkers!



It's hard to believe that this dog is in need of a bath and groom!!!



Bombo Quarry from the air

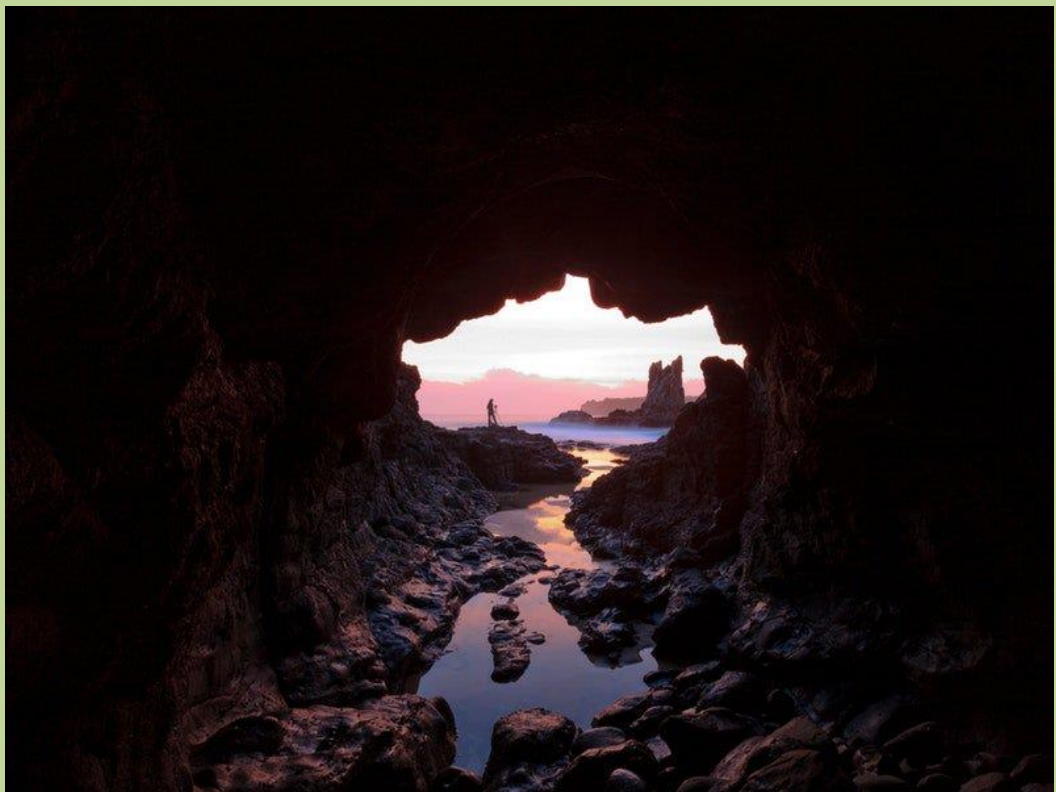
But we were bound for Bombo Quarry via Jones Beach and Cathedral Rocks.



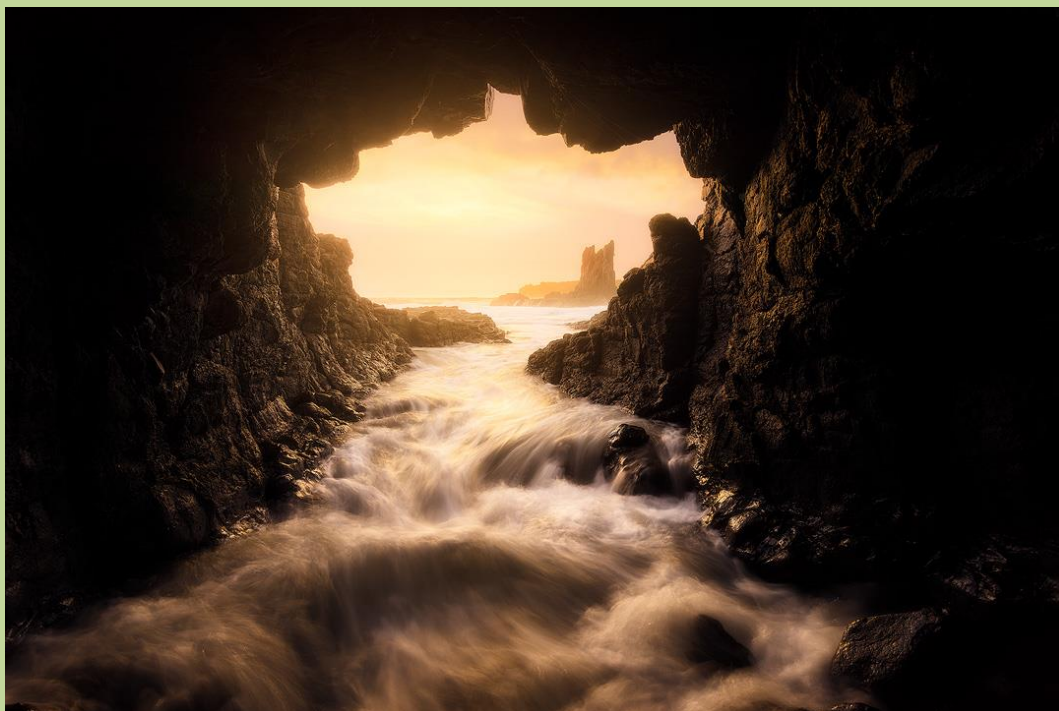




Cathedral Rocks



¹ That one is not mine: <http://www.visitnsw.com/destinations/south-coast/kiama-area/kiama/attractions/cathedral-rocks>



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We had to retreat at that point and loop over the Cliff Drive before dropping down to the Boneyard.



² And for Dave: <http://www.itsworthashot.com/cathedral-rocks/> Lots of tips about getting good shots. Apparently a good rain coat for your camera is a must.

Meanwhile check out the Boneyard and why it's famous for surfing. Go to <https://www.youtube.com/watch?v=bY3yzftiL5g>. It's from Leigh Wilson.



There was not much surf today.

But out we went onto Bombo Point, avoiding screaming teenagers on an excursion (saturated) and their bemused teacher.



Yes, it is my shot. I am just being artistic.



Bombo Quarry

In 1979 a heritage site nomination was proposed by the Geological Society of Australia (NSW Division) for the Bombo Quarry. The importance of the geological features of this area was brought to the attention of the NSW Heritage Council by Dr Suzanne Wass of Macquarie University's School of Earth Sciences (now of professor Sue O'Reilly). The quarry was owned by the Metropolitan Water, Sewerage and Drainage Board and, at that time, it was proposed that a pollution control plant be constructed on the floor of the disused quarry. Following site inspections and lengthy consultations a Permanent

Conservation Order was placed over the site in 1983. It was transferred onto the State Heritage Register in 1999.

Two units of the Late Permian Gerringong Volcanics are exposed on Bombo Headland. The Kiama Sandstone Member forms a narrow wave-cut platform and adjacent vertical cliff face around the south-eastern extremity of the quarry. To the north the sandstone dips below sea level and is overlain by approximately 20m of porphyritic basalt: this formation is termed the Bombo Latite Member. The contact between the two units is well-exposed in the cliff section at the eastern end of the headland.

The red-brown colour of the sandstone (due to oxidisation of haematite) contrasts markedly with the grey-black latite, which displays spectacular columnar jointing elsewhere in the quarry. Isolated columns up to 5 meters in height stand adjacent to the coast between the northern and southern parts of the quarry; just slightly to the north, the sea wall exposes cross sections of the columns 1 to 2.5 metres in diameter, resulting in a 'Giant's Causeway' appearance.

Agglomerates or volcanic breccias have developed in some areas of the quarry, as in the southwestern portion near the access road. This lithology is readily distinguished from the latite by its chaotic appearance and light-coloured matrix.

A capping of cream-coloured weathered latite, still retaining the characteristic porphyritic texture, may be studied at the top of the northern and western quarry faces. This sharply-defined zone of surface weathering and soil formation overlies relatively fresh rock exhibiting columnar jointing.

In later geological eras, the Bombo Latite Member was intruded by at least 5 basaltic dykes of probable Tertiary age which flowed around and between the columns of latite, often taking 90 degree changes in direction. Early investigators (Jaquet 1905 & Harper 1915) mapped and described these dykes, but subsequent development of the quarry provided further exposures of some and obliterated others. Today dykes are mainly exposed in the northern half of the quarry but at least one extends across the floor of the excavation in the vicinity of the isolated columnar stacks. They are of interest due to their inclusions of xenoliths and xenocrysts, which are believed to represent fragments of the earth's mantle incorporated in magmas originating from within that zone. Sussmilch (1905) described xenoliths of hypersthene gabbro, augite peridotite, enstatite peridotite and pyroxenite occurring as rounded fragments and boulders embedded in the basalt. From a deeper level of what was probably the same dyke, Wilshire & Binns (1961) recorded hornblendite and glimmerite as the dominant xenolithes. Present exposures of most of the other dykes appear to lack macroscopically visible xenolithes. (Percival)³

³ <http://www.geomaps.com.au/scripts/bomboheadland.php>

Dave can explain all that!!!!



But by now the rains had truly set in and after lunch under shelter at the northern end of Bombo Beach we bolted for the train, waiting less than three minutes before being warmed inside an air-conditioned express.

