

NATURE NOTES

With Tamborine Mountain Natural History Association

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We tend to think of Tamborine Mountain itself as timeless and unchanging, in fact the landform we know today has been created and modified by millions of years of geological processes such as erosion, weathering, subduction and volcanic activity. The Mountain's geological history includes being 1000m underwater, thrust up from the seabed, smothered in lava and eroded

Three to four hundred million years ago, the eastern edge of Australia was west of its present position. In our region the coastline was west of Toowoomba, shallow seas and a continental shelf extended eastward. Our area was in deep ocean probably over 1000 metres in depth. Around this time (give or take a few million years), west of Toowoomba the oceanic crustal plate was forced under the continental plate (subduction) forming a chain of volcanoes. Over millions of years basalt lava flows and large volumes of eroded sediments from the mountain chain flowed or were deposited eastward. The sea became shallower as evidenced by the shallow sea fossils found on the foothills of Mt Barney.

Three to two hundred million years ago, geological activity on the deep seabed thrust up a high mountain range called the Neranleigh-Fernvale beds. This high terrain was reduced by erosion, and is now seen as the eastern foothills of the Tamborine Plateau, Cedar Creek Falls and outcrops on the north of the Plateau.

Two hundred and fifty million years ago, the eastern edge of the continent began to stabilise, but then about two hundred and twenty five million years ago there were widespread violent volcanic eruptions west of the Neranleigh-Fernvale beds. This was called the Chillingham Volcanics and its rock formations can be seen as outcrops along the western foothills of Tamborine Mountain.

Twenty to twenty five million years ago there were two major volcanic eruptions, which smothered the old topography, one was Focal Peak west of Mt Barney but the most significant was the huge Tweed Volcano. It was about 2000 m high and was centred over the present Mt Warning (this was the central plug) it created a vast dome of lava which extended north to Tamborine Mt, because the lava was so fluid the top of the Tamborine Mt Plateau is nearly horizontal. Over millions of years the lavas decomposed into rich red kraznozom soil and natural processes began to erode the immense sloping cone. Erosion stripped away softer material creating a gigantic erosion caldera, which approximates the original surface of the flanks of the volcano.

To sum up Tamborine Mountain is made up of a combination of rocks from different eras, Neranleigh-Fernvale beds in the eastern foothills, Chillingham volcanics in the north and west; Woogara sandstone in the west and southwest overlaid by basalt lava flows from the Tweed Volcano.

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