Flank Margin Cave Development and Tectonic Uplift, Cape Range, Australia

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The caves on the paleo sea cliffs on the east and west sides of Cape Range, and the caves found in the deep gorges draining Cape Range, are flank margin caves when the caves are located in the Tulki or overlying limestones. The Mandu Formation contains primarily tafoni. The flank margin caves at high elevations are very old, concurrent with the uplift and initial subaerial exposure of Cape Range. As uplift is thought to have ended in the Pliocene, even the lower elevation flank margin caves are likely Late Miocene in age.

The flank margin caves in the Cape Range gorges and valleys developed as a result of complex interplay between tectonic uplift, and Miocene glacioeustasy. Some of the caves may have developed while folding was still occurring, and their original speleogenetic position altered as a result.