



## BRIEF BACKGROUNDS

# COALSTOUN LAKES

## BURNETT DISTRICT

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The Coalstoun Lakes beside the Gayandah-Biggenden road are not well known but they are the only volcanic crater lakes in southeast Queensland. They originated from a relatively recent episode of basaltic volcanic activity, the most recent in southeast Queensland, whose age is estimated at about 600 000 years. Volcanic activity of this young age, and recognisable volcanic landforms, are locally interesting, as they are mainly known from north Queensland and western Victoria and adjacent areas of South Australia.

The basalt lava flows (the Barambah Basalt) appear to have originated mainly from Mount Le Brun (which contains the crater lakes), an unnamed hill about 5km to the southwest, known locally as Hunter's Volcano, and Harvey's Knob, a hill about 2 km the north of the crater lakes. The basalt flowed south for 8km, filling a valley 3 to 5km wide before being channeled west along the old course of Sandy Creek. The present topography of the valley around the village of Coalstoun Lakes with its low gradient to the south and its shallow stony red soils reflects this history. West of Ban Ban Springs the lava continued down the valley of Barambah Creek into the Burnett River, damming and altering the course of the creek as it did so.

*Mount Le Brun* rises about 200m above the surrounding country. It contains two distinct craters elongated along a NW-SE line, each containing a small shallow lake at the bottom. The rims of the craters intersect. A small National Park covers the lakes and parts of the interiors of the craters, but most of the crater rims and the exteriors are on private land. The National Park protects remnants of dry rain forest which once covered the interiors of the craters and probably some of the exteriors. The forest provides an attractive setting to the quiet waters of the lakes. There is an access route from the Gayandah-Biggenden road to the National Park in the interior of the northern crater.

The cone of Mount Le Brun itself is composed of flow-banded and vesicular basalt (ie basalt with numerous gas bubbles preserved), commonly with ropy surfaces. Agglomerate, composed of vesicular basalt fragments, occurs on the northwestern crater rim, and numerous spheroidal volcanic bombs with twisted ends have been found, ranging from 10 to 60 cm in diameter. These features are preserved only around relatively young volcanic centres.

The '*Hunter's Volcano*' on private land 5km to the southwest is a cone composed of vesicular basalt with a dissected crater, breached and sloping to the east. The floor of the crater is higher than its eastern rim and no lake has been able to develop.

*Harvey's Knob* on private land 2km to the northwest is a dome-shaped hill of basalt and agglomerate without a crater. As it seems unlikely that the crater could have been destroyed entirely by erosion, the hill is possibly a volcanic dome, ie a mass of lava that has solidified around the vent soon after eruption.

A lava tube is known on private land a few kilometres to the south of Coalstoun Lakes village. Lava tubes form during movement of a basalt flow when the outer portions cool and solidify to form a crust, and the inner, still-molten material flows on to leave a void behind.

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