

**Kanawinka** means the Land of Tomorrow from the Buandik people and it is also the name of a geological fault line from Naracoorte Caves to Bass Strait at Portland and a Parish name from Coleraine to Casterton about 1911 so all levels of the history, Geological, Indigenous and European are brought together in one name. Linking geology and the people, culture and history, bringing together communities to protect heritage sites and promote geoheritage. See [www.volcanoesdiscoverytrail.com](http://www.volcanoesdiscoverytrail.com)

Initially the formation of the Volcanoes Discovery Trail Committee was to promote the region in 4 precincts and these four precincts are depicted within the Kanawinka Geopark:

**Lakes and Wetlands (Camperdown and Colac)**

**Cones and fall (Hamilton and Warrnambool)**

**Coast and Caves (Portland and Nelson)**

**Craters and Limestone (Mount Gambier, Mount Shank District and Mount Burr Ranges)**

The most important aspects of **Geoparks** are the links between the geology and the people, their stories, culture and history that build into a sustainable source of geotourism, bring jobs to rural and indigenous people and in turn help protect sites of importance and promote geoheritage complementing the work of the local Government Bodies through partnering with all levels of governments and relevant bodies.

According to **Dreamtime legends of the local Boandik Tribe in South Eastern Australia**, the volcanic precinct was formed by the giant Graitbul and his family who wandered around the south-eastern region looking for a place to settle and live in peace. They camped and made ovens at Mount Muirhead and Mount Schank, but were frightened away from both sites by the moaning voice of a bird spirit. Moving to Mount Gambier, they managed to escape from the spirit and there they lived for a long time. Again they made an oven, but one day, water came up from below and put out their fire. They made others, until they had four, which are now the craters of Mount Gambier.

The Kanawinka Geopark is not just Volcanics but also grasslands, lakes, caves, wetlands, fish traps, homesteads, gardens, towns, villages, heritage, legends, history and exploration, stone walls, soldier settlement and much much more.....

## **EDUCATION, PROMOTION AND PROTECTION**

### **Craters and Limestone (Port MacDonnell, Mount Gambier and Millicent)**

The volcanic province in south-eastern South Australia constitutes a western extension to the Newer Volcanics of western Victoria, which contains 17 eruptive centers. These include the isolated eruption points of Mount Gambier and Mount Schank, and the 15 eruption points of the Mount Burr Range.

All the volcanic structures project above a relatively level limestone plain, characterized by poor surface drainage and containing abundant groundwater. Volcanic landforms are varied, ranging from lava flows, scoria domes, composite domes, agglomerate cones to tuff rings or maars.

Mount Gambier's Crater Lakes volcanic area incorporates Brownes Lake, Valley Lake, Leg of Mutton Lake and the Blue Lake, and is estimated to have been formed some

28,000 years ago during two, closely-spaced periods of eruptive activity, each with distinctive characteristics.

Initial eruptions took place at the western end of the crater lakes complex and the Leg of Mutton Lake crater. A series of small maars resulted from this activity, covering the surrounding landscape with ash and lapilli. Lava flows extruded from fissures in the location of Brownes Lake and from the Leg of Mutton Lake crater. A large scoria cone developed at the western end of the complex, sediments of which are now exposed at Bootlace Cave. Activity ceased for a short period of time, allowing the lava flows to cool and crystallise.

The second series of eruptions were on a much larger scale than the first – partly because of the explosive reaction which occurs when a large volume of ground water comes into contact with high temperature magma. Explosions from such a cocktail eventually produced the large open craters seen today. The large craters containing the Blue Lake, Valley Lake and Brownes Lakes were formed when several small vents close together eventually joined.

The Leg of Mutton Lake, now dry, is situated in its own smaller crater and is believed to have formed towards the end of the eruptive activity. Surrounded by many varieties of deciduous trees which are particularly spectacular in autumn, it is popular for its walking trails. This lake has had a history of varying water levels, and was recorded as being near-dry as early as 1859. Levels rose again soon after this period to regain the leg of mutton shape from which it has been named.

Twenty minutes to the south of the city, Mt Schank is a highly prominent volcanic cone, which protrudes above the limestone plain, providing panoramic views. The mountain differs from the craters in Mount Gambier in that its floor is dry, but like Mount Gambier, evidence suggests two phases of volcanic activity.

A small cone on the southern side of the mount was produced by the early phase, together with a basaltic lava flow to the west (the site of current quarrying operations). The later phase created the main cone, which now slightly overlaps the original smaller one and is known as a hybrid maar-cone structure.

Strong onshore winds greatly influenced the ash deposition, the effects of which are evident in the structural shape of the edifice and the distribution of the ash. This dramatic volcanic feature is situated 159 metres above sea level, and has an approximate age of 9,000 years. There is extensive quarrying on the lower western slopes and an old quarry on the eastern slope.

It is understood that a floating island similar to those found in the Colac Shire in Victoria once existed on the south side of Mount Schank. However due to a drop in the watertable over many years, the 'mass' is now part of dry land.

Meanwhile, The Mount Burr Range is the most westerly point of the Volcanoes Discovery Trail. The volcanics, which are much older than those of the more isolated Mounts Gambier and Schank, are mantled by the beach and sand deposits of the Bridgewater Formation, which range in age from two to 10 million years old.

Mount Muirhead is possibly the oldest volcano in the Mount Burr Range. It is well eroded, and has a deeply-developed soil profile on its lower slopes. The edifice is a complex maar and scoria cone structure with several subsidiary vents which have now eroded off. During eruption, the Pleistocene high sea was lapping at its base, causing erosion by waves and onshore winds, and there are many sedimentary structures on the western flanks that have been produced by coastal processes.

Mount Muirhead is privately-owned, and public access is not permitted, however spectacular views can be obtained at the Mt Muirhead lookout located approximately 6km from Millicent on the right hand side of the Mount Burr/Penola Road.

Situated 5km from Glencoe are the volcanic sites of Lake Edward (accessible only by permit) and Lake Leake (open to the public all year round). These two volcanoes are of the tuff ring or maar type which is wide open craters with a low, gently-sloping ash ring. The main crater is complex and may consist of three main vents – two of which are easily spotted. The eruption date is estimated to be 20,000 years ago.

Mount McIntyre is another member of the Mount Burr group, and is an elongated composite volcano consisting mainly of lava flows which erupted from a 7 km long fissure. Ash cones are located at each end of the fissure, with the eastern one containing a swampy crater lake.

Mount Watch- is a scoria dome volcano and forms a subsidiary vent to The Bluff volcanic system. Most of Mt Watch is blanketed by a thick, consolidated sand sequence.

Other volcanoes in the Mt Burr Range include Mt Burr (composite scoria cone and lava, Mt Burr is closed to all public access as it is the highest point in the range and as such it is the location for all the telecommunications towers and equipment.); Mount Graham (composite lava and ash); Campbell Hill (ash dome); Boyce Hill (ash cone); Mt Lyon (ash cone); The Bluff (composite scoria and ash cone with lava); Mt Lookout (ash cone), and Mt Frill (ash dome).

*About the major towns:*

#### Port MacDonnell

Port MacDonnell is regularly referred to as Australia's Southern Rock Lobster Capital and was also the once-home of acclaimed poet Adam Lindsay Gordon. His former cottage, Dingley Dell, is a popular attraction, along with nearby Clarke's Park, and the penguin colony at Cape Northumberland cliffs.

#### Mount Gambier

Mount Gambier is located on the slopes of the Blue Lake and boasts a country charm despite its city status. Shopping centres, museums, art galleries, cinemas, historic pubs and a strong café society provide an eclectic mix of art, history and culture.

#### Millicent

Millicent is the ideal gateway to some of the region's most exciting tourist attractions including Canunda National Park, Millicent Living History Museum, Lake McIntyre, Woakwine Range Tourist Drive, Tantanoola Cave, and the Southern Ports of Beachport, Robe and Kingston. The town itself is also home to the award-winning Living History Museum and the stunning Lake McIntyre, complete with a maze of boardwalks and birdhides.