

**LIANNE EDWARDS**

*Treasures of the Overburden - Mt Augustus I, II, III*

“Overburden” is a mining term, used to describe all the ground overlying a rich mineral seam. To open-cast miners, “overburden” has only negative connotations, as every cubic metre of overburden to be removed reduces the profit from mining the ore lying beneath it. To biologists, “overburden” is the material which shapes and supports all life at the surface; a protective mantle for the inert rocks beneath.

These two differing perspectives collided when a new species of large, long-lived carnivorous land snail, *Powelliphanta augusta*, was found in 2004, only existing on a ridgeline - Mt Augustus, on the Stockton plateau, on the West Coast of New Zealand’s South Island.

A massive open-cast state-owned coal mine had already removed much of the “overburden” on the Stockton plateau, with only steep cliffs at the western edge of the eastward tilted plateau left untouched. The remaining snails lived on top of this escarpment, which, as the highest point on Stockton Plateau, was usually wreathed in cloud, a moist sanctuary amidst weathered sandstone. This ancient uplifted plateau supported not only *Powelliphanta augusta* but a unique assemblage of plants and animals especially equipped for the harsh acidic environment. Due to the challenging environmental conditions, introduced predators were rare, enabling the Plateau’s native fauna and flora to thrive there.

However, the coal beneath the escarpment was high quality coking coal fetching a high price at the time. Though the escarpment was several hundred metres high in places, it was still economical in 2006 to blow up the overburden and cart it all away.

Before the overburden was removed, many of the snails, the Escarpment’s rarest inhabitants, were collected. Most were placed on land below their natural range, in the hope that the snails would manage to live where they had been unable to in the past. A smaller number were placed in a captive breeding programme in a coolstore in Hokitika as insurance against their extinction in the wild. They languish there to this day, unique to the world ‘treasures of the overburden’. Landforms from the Eocene are rare, and once destroyed, cannot be recreated, so there is nowhere to go.

The rock core of this sculpture references the mining operation that deconstructed in mere months an escarpment that took millennia to form. Solid Energy, the State Owned Enterprise (SOE) coal mining company which undertook this dismantling, subsequently went into liquidation, with the New Zealand public paying its millions of dollars of debt, as well as losing Mount Augustus.

The core also highlights the lengthy geological time frame over which the unique habitat for the snail evolved. Formed over eons by the processes of erosion, subsidence, compression, uplift and weathering, the geological profile of the plateau consists of a basement of granite from the time of Gondwanaland, sandstone, coal and then the overlying weathered sandstone terrain upon which these unique snails lived.

As reporter Charles Mitchell states in his 2018 article ‘What happened here’\*: “When New Zealand had a choice between money and the environment. It chose money”.

\*see <https://interactives.stuff.co.nz/2018/10/what-happened-here/>