

## Symposium Dinner Presentation

# *Rivers of Gold: Understanding how the gold rush changed Victoria's Rivers*

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*Report prepared by Dr Peter Mitchell, Biolinks Alliance*

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Susan is an industrial archaeologist and is Director of the Rivers of Gold Project. The project (<https://rivers-of-gold.com/>) is a collaboration between archaeologists, geomorphologists and geochemists (La Trobe University, University of Melbourne and Lincoln University [UK]). The project aims to evaluate the legacy of gold mining tailings (sludge) at catchment scale in the Loddon, Ovens and Leigh/Yarrowee River catchments. In particular, it will identify and reconstruct pre-European floodplain surfaces in mining-affected catchments and through this modify our understanding of "reference condition".

The photo of Tullaroop Creek at Eddington near the Loddon River is a typical scene but the reality is, it has been highly modified by mining sludge. Mining sludge was a major issue for farmers who saw their land being covered – often repeatedly – by the sludge. Numerous petitions were sent to the State Government seeking that tailings be retained at mine sites and that their water supplies will be "free of injurious polluting influences placed in it by the gold mining companies". Such petitions were included in several inquiries and royal commissions into the sludge question.

The techniques used to extract gold varied in different districts, from simple sluicing using boxes to hydraulic sluicing, puddling and quartz milling – all using water. The total amount of alluvium produced between 1851 and 1900 was 650 million cubic metres. In addition, the goldfields were denuded of vegetation and that would have added to the sludge entering local waterways. Bucket dredging began in 1900 and this produced around 175 million cubic metres of sediment up to 1955.

As a result, complaints about sludge damage were widespread along all the main river valleys where mining occurred across Victoria. The degree of the damage can be seen in the photo of Leigh River at Shelford in 1909. Farmers recorded building fences above fences above fences, as the depth of sludge increased.

Along these waterways the natural chains of ponds and braided valleys were filled with sludge and the waterways became deep gullies sliced through the sludge and underlying

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valley deposits. The watertables were now well below the land surface. With the original vegetation covered with sludge, the diversity of plants was reduced with a few older surviving red gums poking up through the sludge. This is part of our legacy from that time.