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Old lime kilns buried in Val Chavagl (Swiss National Parc)

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Mass movements in the mountains can result in some unexpected discoveries. On September 10, 2017, strikingly white components were found in the western slope of the Val Chavagl, Swiss national Parc. The first inspection identified this as residual material of a lime kiln. Strikingly, the remains of the lime kiln were stuck in the slope, i.e., they were part of the material that built up the scarp and were not merely attached or transported from above. The rest of an old, former lime kiln is part of the terrace. Vast amounts of sediment covered this lime kiln following a storm around the Munt Chavagl - Munt la Schera.

Of interest to the studies of past and most recent mass movements and catastrophic flooding is the timing of the operation and destruction. The age of the lime kiln can be estimated based on historical documents and inventory of lime kilns in the region, where the oldest known so far dates to 1560 CE (Parolini 2012). No charcoal was found in the remains of the newly discovered lime kiln; therefore, another approach was proposed i.e., dating organic remains embedded in deposits of catastrophic flooding. Larch trees, which were discovered at 1840 -1860 m asl, allowed for dendrochronology and radiocarbon analysis. The results obtained indicate that the trees died in the mid 17th century, at the latest. Moreover, our chronology sets Terminus ante quem TAQ for the construction and operation of the lime kiln. Our results are relevant for understanding natural hazards as well as reconstruction and protection of cultural heritage in the region of the Swiss National Parc.

Parolini, J.D., 2012. Vom Kahlschlag zum Naturreservat: Geschichte der Waldnutzung im Gebiet des Schweizerischen Nationalparks. Haupt.