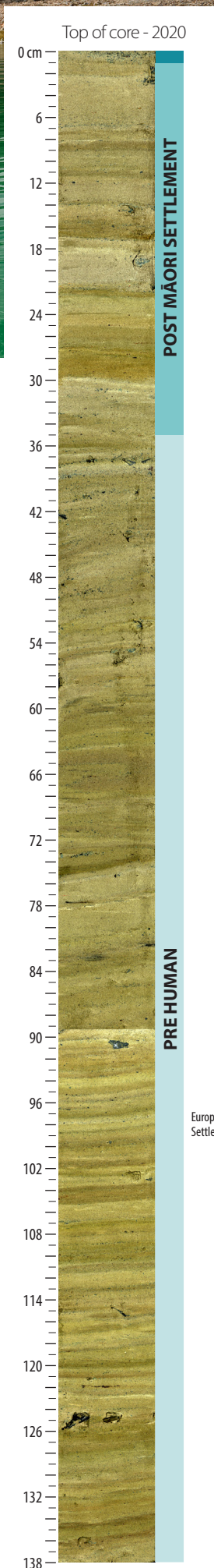




Lakes380

Our lakes' health
past, present, future
Me hoki whakamuri,
kia haere whakamua



DUNCAN STREAM TARN 1

Region: Canterbury **Location:** West of Lake Pukaki **Coords:** 44° 0' 39" S 170° 2' 37" E **Depth:** 4.6 m

At an altitude of 1840 m, Duncan Stream Tarn 1 is the uppermost of a remote series of alpine lakes above the treeline in the ranges west of Lake Pukaki.

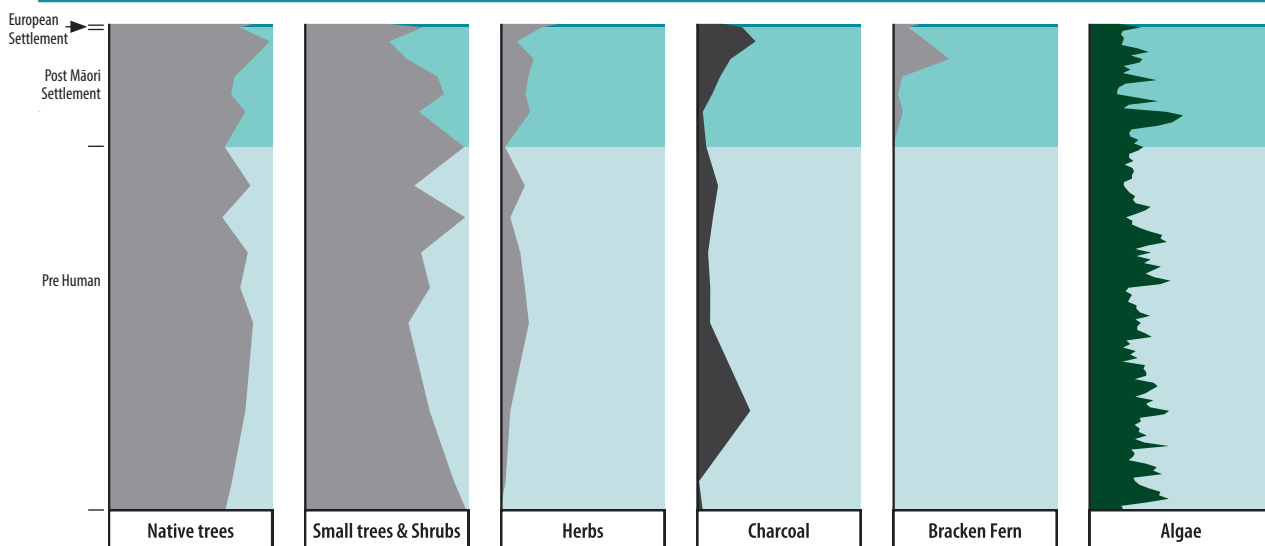
Initial results from the sediment core suggest that Duncan Stream Tarn 1 has changed little since before humans arrived in Aotearoa. The sparse vegetation in this exposed rocky environment has resulted in very slow sediment rates. The pollen in the core reflects the vegetation of the wider region. Native forest, predominantly podocarp as well as small trees, shrubs, ferns and herbs are dominant at lower altitudes.

The pollen data suggest that as Māori settled in the region there was some vegetation change at lower altitudes. This is shown in the graphic

below with increased charcoal (burning) and bracken fern pollen associated with landscape disturbance. European settlement and land use change is signaled by non-native pine pollen and increased grass pollen (herbs) in the wider region.

Algae have always been present in the lake but the levels are low and vary over time. Shifts in the amount of algae are likely related to pulses of sediment washed into the lake. These can be seen in the sediment core photograph.

POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~6000 YEARS



This graphic indicates the changes in concentration of plants, charcoal or algae through time.