



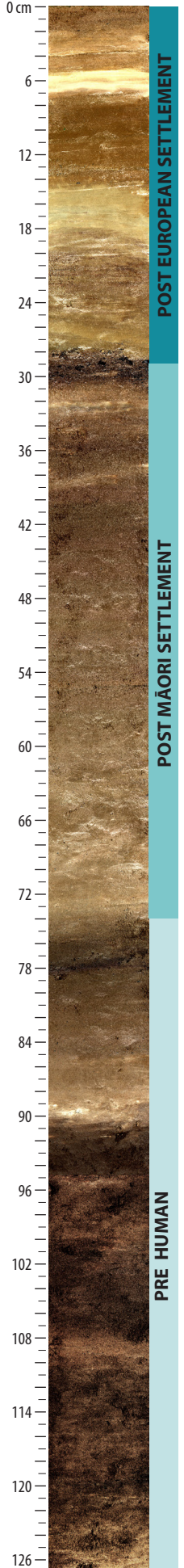
Lakes380

Our lakes' health past, present, future

Me hoki whakamuri, kia haere whakamua



Top of core - 2020



HORSESHOE LAKE



Region: Canterbury **Location:** Lewis Pass **Coordinates:** 42° 35' 52" S 172° 31' 19" E **Depth:** 10 m

Horseshoe Lake is a small lake located on the south side of the Lewis Pass in the central foothills. It lies on the seismically active Hope fault-line.

Initial results from the sediment core suggest that prior to human arrival the vegetation around the lake was dense native forest, dominated by beech trees.

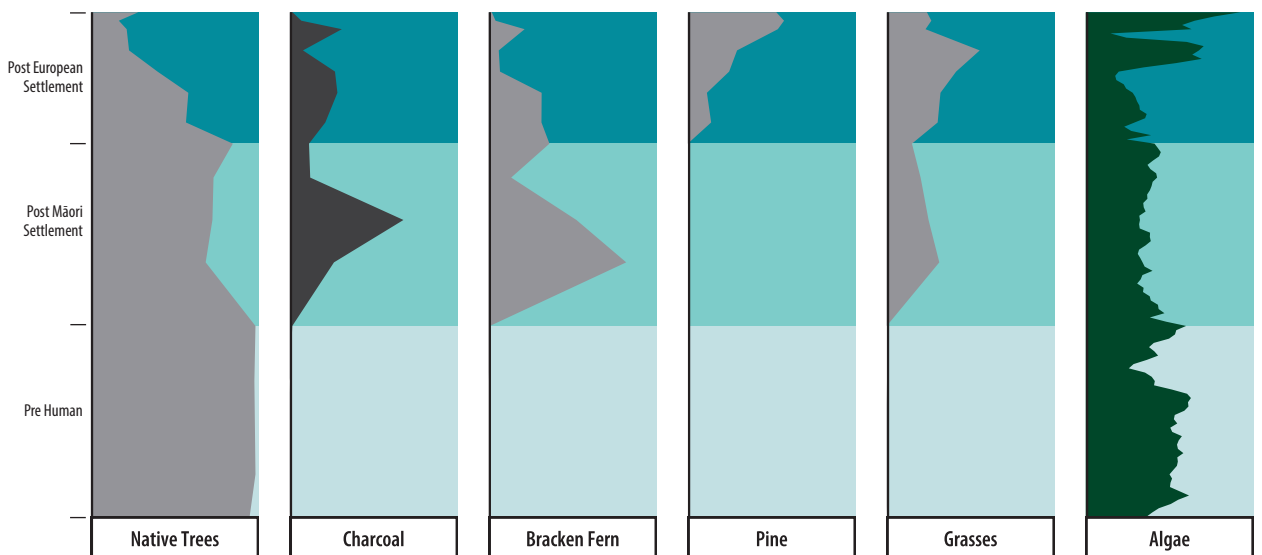
After Māori settlement, some land clearance began. This is highlighted in the graphic below with evidence of fires (charcoal) and bracken fern, which is often associated with landscape

disturbance. There was a corresponding decline in native trees and an increase in grasses.

Post European settlement forest clearance increased. The native species were replaced by grasses and non native trees such as pine were planted in the region.

Algae have always been present in the lake at variable levels. There appears to have been a marked increase in the last 50-70 years.

POLLEN, CHARCOAL & ALGAE LEVELS FOR THE PAST ~1500 YEARS



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