

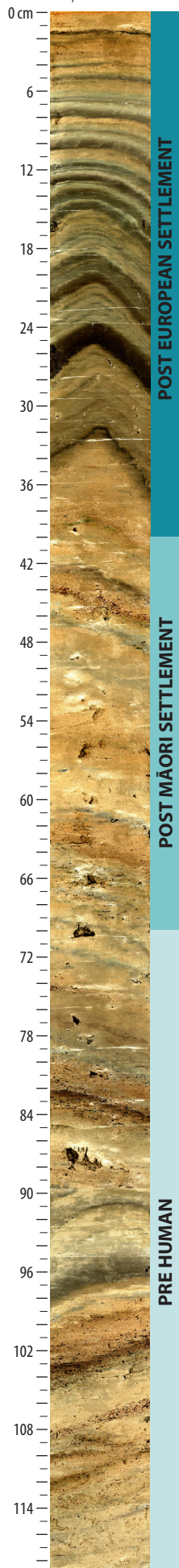


Lakes380

Our lakes' health past, present, future

Me hoki whakamuri, kia haere whakamua

Top of core - 2020



LAKE McRAE

Region: Marlborough **Location:** Molesworth **Coordinates:** 42° 11' 1" S 173° 19' 48" E **Depth:** 42 m

Lake McRae is an alpine lake in Molesworth Recreation Reserve, in the South Inland Kaikoura Ranges in Marlborough. The lake formed when two large landslides dammed the valley at the end of the last ice age about 15 thousand years ago.

Initial results from the sediment core suggest that prior to human arrival Lake McRae was surrounded by dense native forest abundant in beech and podocarps (especially mātai), and smaller trees such as coprosma and celery pine.

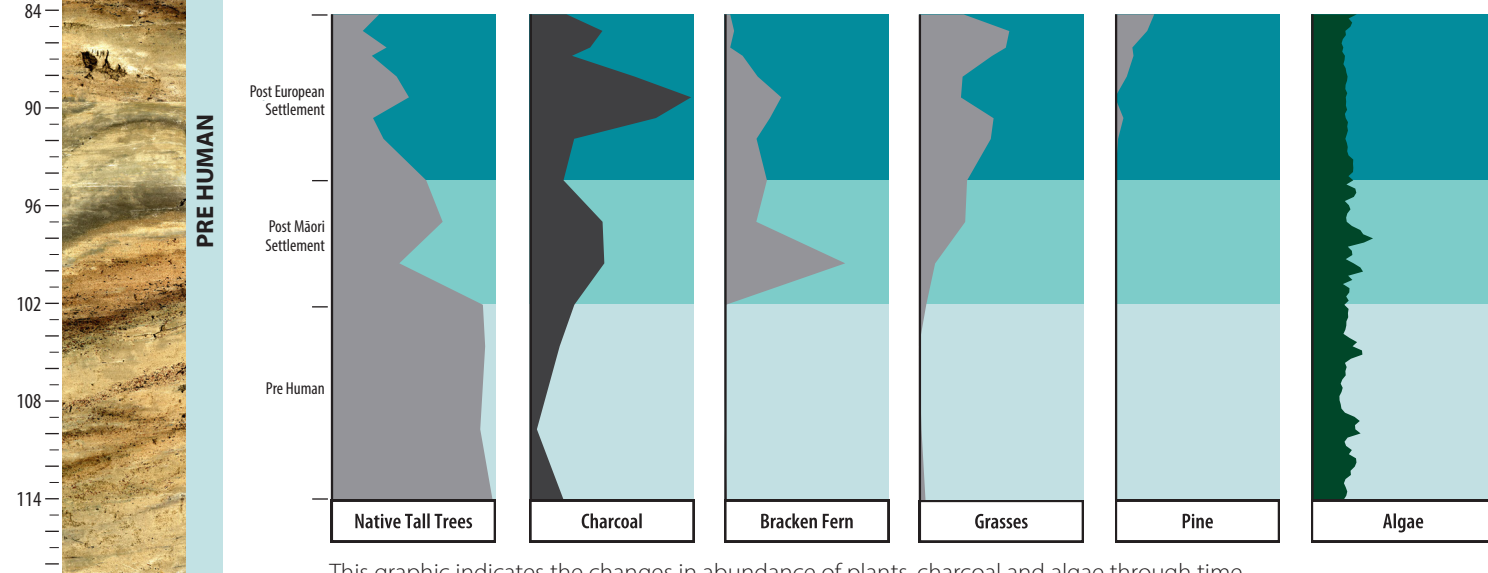
After Māori settlement, some vegetation clearance began in the region. This is highlighted in the graphic below by the decrease in tall trees, and increased charcoal (fire) and bracken

fern, commonly associated with landscape disturbance.

Post European arrival clearance of native forest continued. Pastoral lands increased and non native trees such as pine were planted in the region. Willow trees now line the lake margins.

Algae have always been present in the lake, but their level has not changed markedly over the last about 1500 years.

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



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