

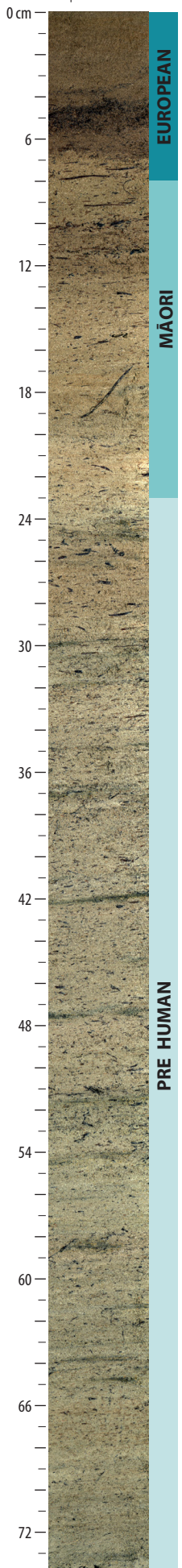


Lakes380

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



Top of core - 2020



LAKE EMMA KIRIHONUHONU



Region: Canterbury **Location:** Ashburton **Coordinates:** 43° 38' 19" S 171° 6' 23" E **Depth:** 2.3 m

Kirihonuhonu (Lake Emma) is a shallow, high country lake in the Ōtūwharekai (Ashburton Lakes) area. The lake has suffered from summer algal blooms due to high nutrient levels. It was a kāinga mahinga kai (food-gathering place) for Ngāi Tahu.

Initial results from the sediment core suggest that prior to human arrival Kirihonuhonu was surrounded by native podocarp forest (particularly mataī) and small trees such as celerey pine.

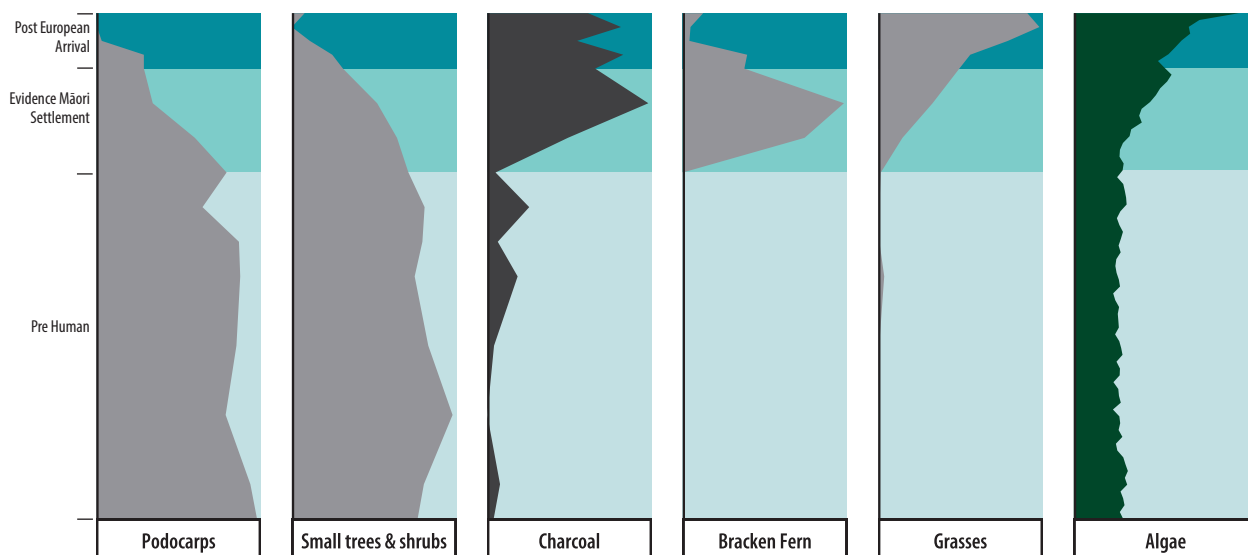
After human arrival some reduction in native vegetation occurred. This is highlighted in the graphic below by the increase in charcoal

(burning) and bracken fern, which is commonly associated with landscape disturbance.

Post European arrival there was a marked change in the landscape. Most remaining native forest was removed and grassland became the dominant vegetation surrounding the lake.

Algae have always been present in the lake, but have increased since human arrival.

POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~4000 YEARS



The shaded area indicates the concentration of plants, charcoal or algae through time.