



Lakes380

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



ROTO-NUI-A-WHATU LAKE TUAKITOTO

Region: Otago **Location:** Kaitangata **Coordinates:** 46° 13' 37"S 169° 49' 29"E **Depth:** 1 m

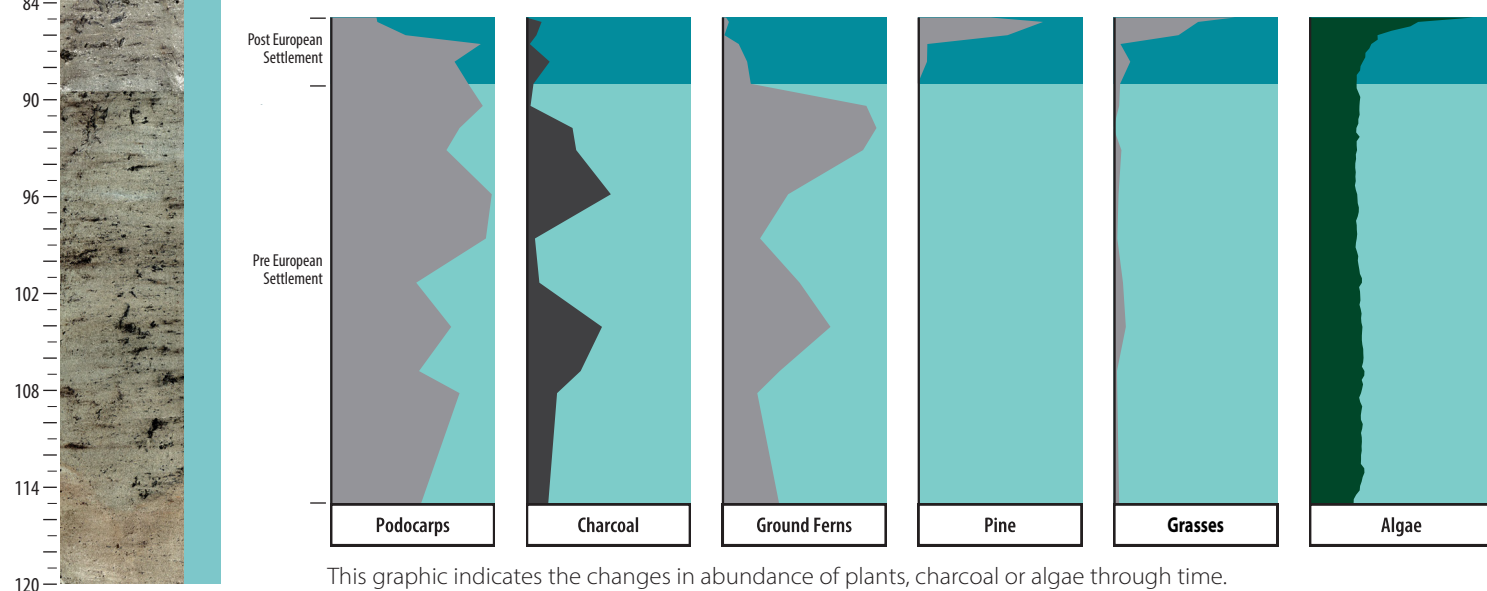
Roto-nui-a-Whatu (Lake Tuakitoto) is a large regionally significant freshwater wetland in the Lower Clutha River Catchment. Once part of a much larger wetland system including Lake Kaitangata, it has been impacted by drainage for farming.

Initial results from the sediment core suggest that pre European settlement, Roto-nui-a-Whatu was surrounded by native forest abundant in podocarps (mātai and rimu in particular), ferns, and small trees and shrubs such as celery pine and coprosma. Some vegetation disturbance was evident during this period which is shown in the graphic below by charcoal (fire) and an increase in ground ferns commonly associated with landscape disturbance.

Post European arrival native forest was replaced by pastoral lands, and non native trees such as pine were planted in the region. This is shown in the graphic below by the increase in grasses and pine pollen, and the decrease in podocarps and ground ferns.

Prior to European settlement algal levels were constant but there has been a marked increase in recent decades.

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



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