



Lakes380

Our lakes' health
past, present, future

Me hoki whakamuri,
kia haere whakamua



LAKE WESTMERE ROTO MOKOIA

Region: Manawatū Whanganui **Location:** Whanganui **Coordinates:** 39° 53' 43" S 174° 59' 57" E **Depth:** 6 m

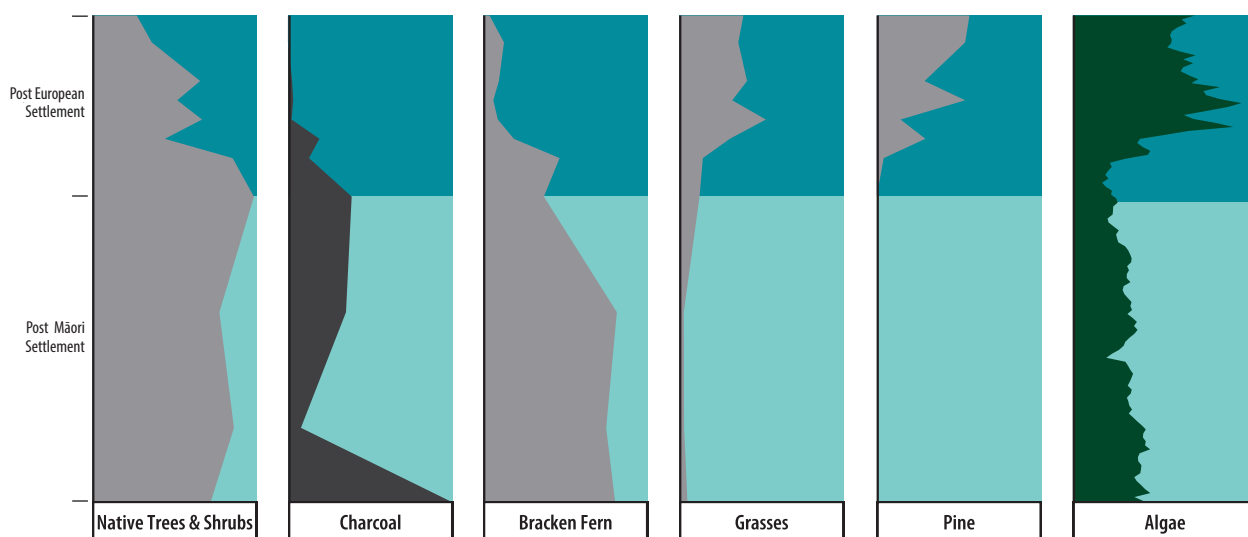
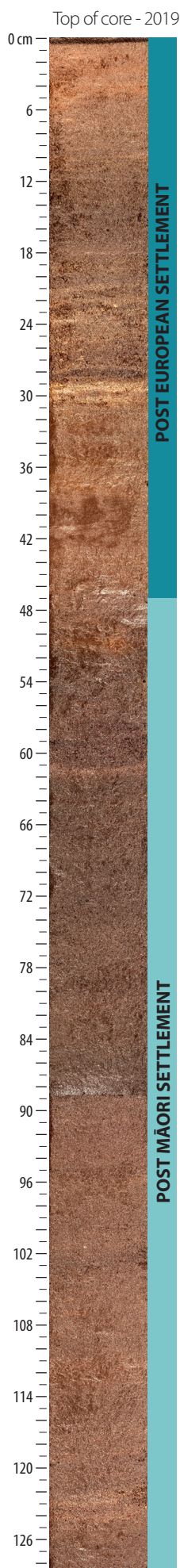
Roto Mokoia (Lake Westmere) is a small coastal dune lake located north of Whanganui. Since 1914 the lake and surrounding area has been a designated wildlife refuge.

Initial results from Roto Mokoia (Lake Westmere) sediment core suggest that the core does not date back to pre human times. Post Māori settlement Roto Mokoia was surrounded by a mix of tall native trees rich in podocarps, kāmahi and beech, as well as the native shrub tutu. The abundance of bracken fern, often associated with vegetation modification, and charcoal (fire) in the graph below suggest some vegetation clearance happened during this period.

Post European arrival, clearance of native forest increased. Pastoral lands were established and non native trees such as pine were planted in the region.

Algae have always been present in the lake but their abundance has increased markedly over the last about 150 years. Roto Mokoia now has poor water quality and is considered ecologically unhealthy.

POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~ 500 YEARS



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