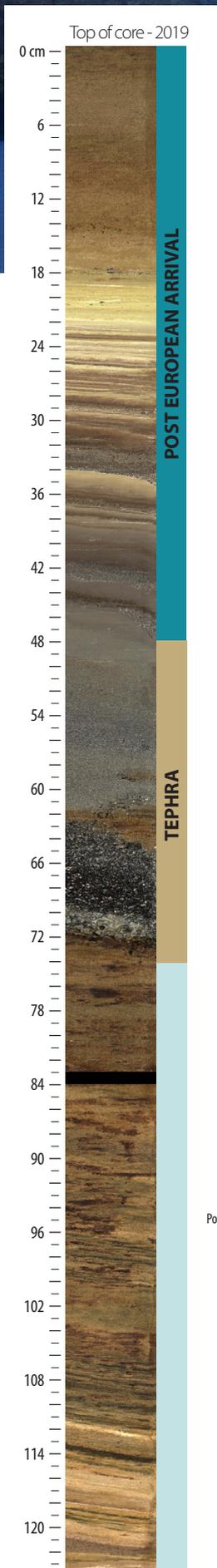




Lakes380

Our lakes' health past, present, future

Me hoki whakamuri, kia haere whakamua



# LAKE ŌKATAINA



TE ARAWA LAKES TRUST

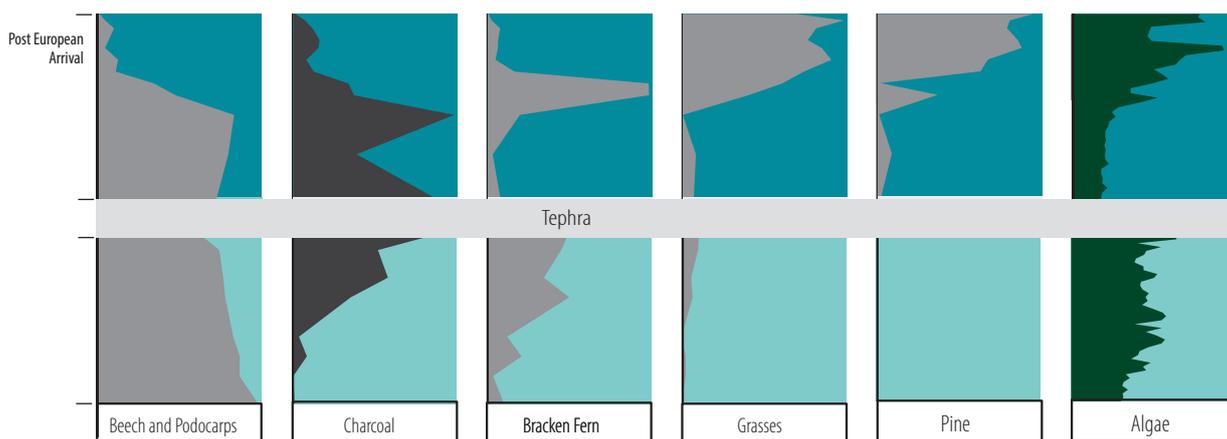
**Region:** Bay of Plenty **Location:** Rotorua **Coordinates:** 38°06'36 S 176°25'17 E **Depth:** 80 m

Lake Ōkātaina (which translates to the lake of laughter) is a large deep clearwater lake. It is home to a number of native freshwater species, and a popular trout fishing lake. The lake has no surface outlet and its water level varies dramatically in response to rainfall.

The initial results from the sediment core suggest that between approximately 1300 to 1800 AD beech and podocarp forests were abundant around the lake margins. During this period there is evidence of some vegetation clearance in the region. This is highlighted in the graphic below by the increase in charcoal (burning). Evidence of the 1886 Mt Tarawera eruption is visible as a tephra (rock fragments and particles ejected by a volcanic eruption) in the core. Once the vegetation recovered

from the eruption, native trees dominated in Lake Ōkātaina's catchment. The pollen from the sediment core highlights the increase in pine plantations and pastoral land in the wider region. Algae concentrations decreased after the Tarawera eruption, likely due to large amounts of ash washing into the lake. They then remained relatively constant, although there have been some slight increases in recent decades.

## POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~700 YEARS



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