



Lakes380

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



Top of core - 2021

0 cm
6
12
18
24
30
36
42
48
54
60
66
72
78
84
90
96
102
108
114
120
126
132
138
144
150
156

POST EUROPEAN

POST MĀORI

PRE HUMAN

SKELETON LAKE

Region: Southland **Location:** Garvie Mountains **Coordinates:** 45° 27' 3" S 68° 55' 31" E **Depth:** 11 m

The Skeleton Lakes are a pair of alpine lakes high in the Garvie Mountain Range in Southland. The upper lake drains to the lower via a stream. The lower Skeleton Lake was sampled.

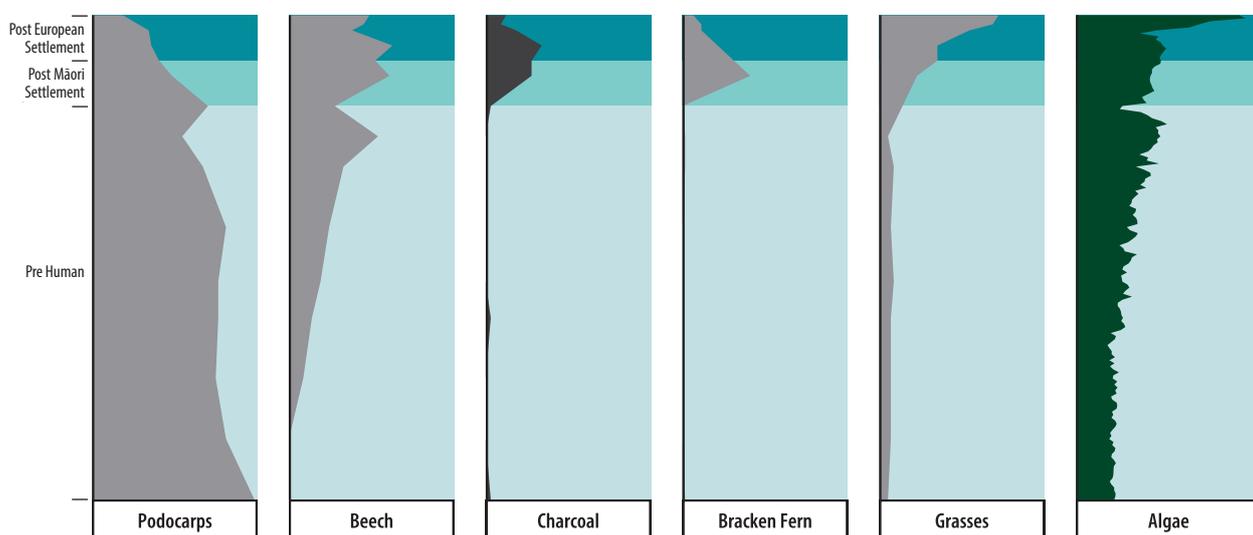
Situated at 1480 m in altitude the Skeleton lakes would have always been above tree-line. The initial results from the sediment core suggest that prior to human arrival the land in the valleys below the lakes was covered in dense native forest. Initially dominant in podocarps (especially mataī) and small trees and shrubs such as celery pine, while beech slowly established later.

Post Māori settlement and further afield in the region some vegetation clearance began. This

is highlighted in the graphic below by charcoal (fire) and an increase in bracken fern, commonly associated with landscape disturbance. Beech forest remained predominant in parts of the region as lowland podocarp forest declined. Post European Settlement in the wider region native forest was cleared and replaced with grassland.

Algae levels have increased in the lake with a marked rise observed in the last approximately 100 years.

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



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