

Poutō Peninsula

Phoebe's Lake (Poutō), NRC No. 346.



Phoebe's Lake. The most recent photo 2017 (right) shows the increase in marginal emergent vegetation and native vegetation on the surrounding hills compared with 2008 (left). Note Manchurian wild rice (*Zizania latifolia*) on the right of 2017 photo.

Summary

Survey dates 2005 and 2017.

Overall ranking

Moderate: A small lake, with indigenous submerged vegetation and a wetland margin.

Threats

Reintroduction of invasive weeds. Lagarosiphon has been eradicated, but small areas of Manchurian wild rice remain.

Management recommendations

Continue Manchurian wild rice eradication.

No further monitoring required.

Description

A small (1.2 ha of open water) dune lake (1696778E, 5981948N), 4 m deep. The catchment is primarily pasture. There are no inflows or outflows. Access is through less than 1 km of well-formed track, but with no easy access into the lake.

Wetland vegetation

In addition to 1.24 ha of open water, the lake has 0.9 ha of emergent wetland surrounding it. Emergent vegetation was dense with raupō (*Typha orientalis*), kuta (*Eleocharis sphacelata*) and *Machaerina articulata* abundant.

Manchurian wild rice (*Zizania latifolia*) occupied 50% of the margin in 2001 but was targeted for eradication and only small patches of young re-growth were found in 2017.


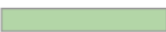

Submerged vegetation

in 2017, *Nitella* sp. aff. *cristata* formed dense charophyte meadows to 4.1 m deep with *Potamogeton ochreatus* in dense patches growing to 1.6 m tall. *Utricularia gibba* was common in shallow areas.

This contrasts markedly with 2005 when lagarosiphon (*Lagarosiphon major*) was the dominant species in shallow water forming dense surface-reaching beds extending to 2.6 m water depth. One treatment of endothall eradicated the lagarosiphon, restoring the lake's native condition.

LakeSPI

Lake Phoebe Submerged Plant Indicators

Survey Date	Status	LakeSPI %	Native Condition %	Invasive Impact %
March 2017	High	67% 	79% 	36% 

Lake Phoebe is categorised as being in moderate ecological condition with a LakeSPI Index of 67%.

Water birds

The dense emergent cover may provide good habitat for crakes and other secretive water birds. One pair of dabchick (*Poliocephalus rufopectus*) were seen, with over 100 paradise duck (*Tadorna variegata*) and 10 scaup (*Aythya novaeseelandiae*) during the 2017 visit.

Fish

NIWA FBIS records shortfin eel (*Anguilla australis*) caught in this lake. Golden bell frogs (*Ranoidea aurea*) were common in 2005.

Aquatic invertebrates

None reported. No mussels or koura were found.

Endangered species

A resident pair of At-Risk Recovering dabchick (*Poliocephalus rufopectus*) were seen in 2017.

Lake Ecological Value

Lake Phoebe has an improved Lake Ecological Value score of 7 "Moderate", due to an increased Native Condition Index resulting from lagarosiphon eradication.

There has been less grazing around the lake, it has been fenced off and there has been a notable increase in native vegetation on the hills around the lake.

Threats

Invasive species of plants and pest fish, although access is difficult.

Management recommendations

Continue Manchurian wild rice eradication. No further monitoring required.