

Poutō Peninsula

Kapoai (Poutō), NRC Lake No. 296.



Kapoai. Photo showing the fenced margin with dense kikuyu (*Cenchrus clandestinus*) dominating the retired margin. (Photo: Paul Champion 18 September 2018).

Summary	Kapoai
Surveyed:	2005, 2007 2014 and 2018 (reconnaissance).
Overall ranking:	Moderate-Low: Limited submerged vegetation and marginal vegetation present. Fencing of lake margin almost complete, water quality may improve over time.
Threats:	High nutrient enrichment, with frequent algal blooms. Access difficult and likelihood of submerged pest plant establishment is currently low.
Management recommendations:	Lake native biodiversity value monitoring every 5 years. Complete fencing the lake and consider planting options around the margins. Eradicate African feather grass.

Description

A dune lake (1674985E, 6010755N) 1.6 ha where depth has not been determined. The lake is set within a pastoral catchment but has been recently fenced around much of the perimeter. There is an inlet at the northern end of the lake, draining approximately 2 km of pasture to the north-east. Access to the lake is across 2 km of private farmland with access through a locked gate.

Wetland vegetation

The emergent sedges *Schoenoplectus tabernaemontani* and kuta (*Eleocharis sphacelata*) were re-establishing on the lake margins but much of the lake margin was fringed by kikuyu (*Cenchrus clandestinus*).

Short turf communities were described as common in visits prior to 2018, with *Fimbristylis velata*, *Centipeda aotearoana* and *Alternanthera nahui* present with the amphibious *Limosella lineata*, *Myriophyllum propinquum* and *Callitriche petriei*. In 2018, lake levels were high, and no turf species seen, apart from emergent mats of *Myriophyllum propinquum*.

The problem weed African feather grass (*Cenchrus macrourus*) was noted adjacent to the pump shed on the eastern side of the lake.

Submerged vegetation

In 2018, open submerged beds of the native *Potamogeton ochreatus* and introduced *Potamogeton crispus* were common from the outer edge of the emergent species to a depth of ~3 m. Water clarity was poor with both filamentous and planktonic algal blooms evident.

No submerged vegetation was present in 2004 or 2007. In 2014 *Potamogeton ochreatus* formed submerged beds from 0.5 to 2 m deep. The lake also had algal blooms on all those sample occasions.

LakeSPI

No LakeSPI score was generated.

Water birds

Few birds were noted during the 2018 survey, with three black shag (*Phalacrocorax carbo*) and an individual little shag (*P. melanoleucos*) and black swan (*Cygnus atratus*).

Fish

NIWA FBIS records from this lake include common bully (*Gobiomorphus cotidianus*), shortfin eel (*Anguilla australis*) and the pest fish rudd (*Scardinius erythrophthalmus*). There are reports of tench (*Tinca tinca*) introduced to this lake. A dead goldfish (*Carassius auratus*) was noted in 2007.

Aquatic invertebrates

No invertebrates were recorded.

Endangered species

Three black shag (At-risk Naturally Uncommon) were noted in 2018, probably indicating the continued presence of large coarse fish introduced into this lake. The At-risk Naturally Uncommon sedge *Fimbristylis velata* was previously common in the exposed lake-shore turf but no habitat for this plant was present in 2018.

Lake Ecological Value

An ecological value rating of 4 "Moderate to Low" was assigned to Kapoai based on the highly enriched nutrient status, poor wetland and emergent buffering and poor species diversity. However, there are signs of improvement as fencing has permitted natural regeneration of some emergent species and submerged plants were recorded for the first time in 2014.

Threats

Access difficulty and likelihood of submerged pest plant establishment is currently low. Elevated levels of nutrients remain the highest threat to Kapoai.

Management recommendations

Lake native biodiversity value monitoring every 5 years. Complete lake fencing and consider planting options around the margins. Advocate eradication of African feather grass to the landowner before it spreads further.