

## North Dargaville Lakes

Te Riu Lagoon (Waipoua), NRC Lake No. 200A.



**Te Riu Lagoon** viewed from the southern end, and showing the diverse emergent vegetation (2023, Paul Champion).

Summary	Te Riu Lagoon
<b>Surveyed:</b>	2023 (recce)
<b>Overall ranking:</b>	<b>High-Moderate:</b> A very shallow, small lagoon with diverse emergent and submerged vegetation.
<b>Threats:</b>	The invasive wetland weed royal fern ( <i>Osmunda regalis</i> ) is well established in the marginal wetlands and could expand to dominate the fringe of this lagoon.  Little risk of aquatic pest introductions.
<b>Management recommendations:</b>	Control of royal fern is advocated.  No further monitoring.

## Description

Te Riu Lagoon (1644182E, 6051635N) is 0.5 ha in area with a maximum depth of 1 m. It is accessible only by foot along a dune ridge accessed from 4WD forestry roads. It was likely formed by damming of a former course of the Waipoua River, sandwiched between mobile dunes to the west and a consolidated older dune face to the east. The catchment is predominantly open grassland and low scrub with a wetland margin to the north and south.

## Wetland vegetation

The lake is fringed with erect emergent plants, predominantly *Typha orientalis*, *Eleocharis sphacelata*, *Schoenoplectus tabernaemontani*, *Bolboschoenus medianus*, *Machaerina articulata*, *M. juncea* and *Apodasmia similis*. Associated sprawling emergent species included *Isachne globosa*, *Pericaria decipiens* and *Isolepis prolifera*.

The free-floating plants *Azolla pinnata*, *Landoltia punctata* and *Wolffia australiana* were common amongst emergent fringing vegetation.

Around 20 large clumps of the invasive weed royal fern (*Osmunda regalis*) were observed in the fringes of this lagoon.



**Te Riu Lagoon** showing a large plant of royal fern (yellow circle) amongst *Bolboschoenus medianus* at the southern end of the lagoon (2023, Paul Champion).

## Submerged vegetation

A reconnaissance survey was undertaken by snorkel in 2023. Te Riu Lagoon had a diverse submerged vegetation, with an average cover of 50% across the 1 m deep water body. The most abundant species were *Myriophyllum propinquum* and *Chara australis* (average covers 20%), with lesser amounts of the charophytes *Nitella* sp. aff. *cristata* and *C. globularis*, the pondweeds *Potamogeton cheesemanii* and *P. ochreatus*, swamp lily (*Ottelia ovalifolia*) and the invasive *Utricularia gibba*. Plants were mostly covered by a cyanobacterial mat.



## LakeSPI

No LakeSPI Index was calculated for this lagoon.

## Water birds

A pied shag (*Phalacrocorax varius*) was seen, and fernbird (*Bowdleria punctata vealeae*) were heard during the site visit.

## Fish

Large grey mullet (*Mugil cephalus*) were observed in the lagoon indicating that there must be intermittent connection with the sea.

## Aquatic invertebrates

No invertebrates were noted during the snorkel survey.

## Endangered species

The At-Risk Declining fernbird and At-Risk Recovering pied shag were recorded.

## Lake Ecological Value

A High to Moderate Lake Ecological Value score of 8 was calculated for Te Riu Lagoon, with a maximum score for buffering and moderate scores for native species richness and submerged native vegetation integrity.

## Threats

Access is difficult and so aquatic pest introductions are unlikely. Royal fern is targeted for eradication in Northland Region<sup>i</sup> and if left uncontrolled this plant could form a dense tall monoculture in the wetland margin of this lagoon.

## Management recommendations

Control of royal fern is advocated, targeting eradication from the wetlands surrounding Te Riu Lagoon.

No regular monitoring of the lagoon is recommended.

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<sup>i</sup> <https://www.nrc.govt.nz/environment/weed-and-pest-control/pest-control-hub/?pwsystem=true&pwid=41>