

Update on the Waitaki River Bird Habitat Enhancement

May 2017



The Department of Conservation, Environment Canterbury, and Otago University has undertaken a trial to create and maintain predator proof breeding sanctuaries for the endangered Black Fronted Tern in the Lower Waitaki Riverbed.

Why is this being carried out?

Tarapiroe, Black Fronted Tern, are nationally endangered and is a toanga species for Ngai Tahu. The world population is only around 7,000 birds, all of which breed in the braided riverbeds of the South Island. Approximately 10% of these birds nest in the Lower Waitaki, making the it a significant catchment for them. Tarapiroe are in decline mainly due to the combined effects of predation and weed invasion.

The aim of this study is to create islands with reduced weed growth and mammalian predator use - in an effort to lift the nesting success of Tarapiroe, when they are particularly vulnerable.

What has been done?

During winter 2016, Ecan river engineers created seven island sites totalling 6.6 ha by scraping weed vegetation off existing islands and piling loose shingle up into new islands with a bulldozer.



Ecan River Engineer Andy Philpott creating the first artificial tern breeding island at the Otiake-Wataki River confluence.

Spraying of new gorse and other weed seedlings was undertaken in September 2016 just prior to nesting starting to ensure the islands stayed clear and attractive to native river birds.

Monitoring the islands effectiveness

Over the 2016 spring and summer Ann-Kathrine Schlesselmann of Otago University has monitored the breeding success of 189 black-fronted tern nests on the newly created island sites using remote cameras and walk-through checks. This has also been done at other sites in the Waitaki River system to allow comparisons of the effectiveness of the new islands to be made.

Ann-Kathrine has also carried out predator population density monitoring both on the new islands and on adjacent river berms using tracking tunnels that allow footprints of animals using the area to be captured and analysed.

So, did the islands help the birds?



Black Fronted Tern chick and Wrybill utilising new island habitat in the Waitaki summer 2017. Photo:Ann-Kathrin Schlesselmann.

All of the newly cleared islands were used for breeding by a range of threatened braided river bird species. The weed spraying was successful in suppressing any large scale weed regrowth and all islands have remained intact despite long periods of river flows in excess of 500 cumecs.

One island supported more than 700 black-billed gulls on nests, and two islands supported large black-fronted tern colonies with 80 and 150 birds on nests respectively.

Wrybill were observed breeding on five of the islands and Banded Dotterel on six of the islands. Both of these braided river specialists are ranked as 'vulnerable'. In addition, Pied Stilt were observed breeding and South Island Pied Oystercatcher have been using the islands.

Ann-Kathrin Schlesselmann will further study the data gathered last season for the preparation for submission of her doctoral dissertation at Otago University, which will lead to recommendations on island building and other conservation management to ensure ongoing successful nesting for braided river bird nesting.

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