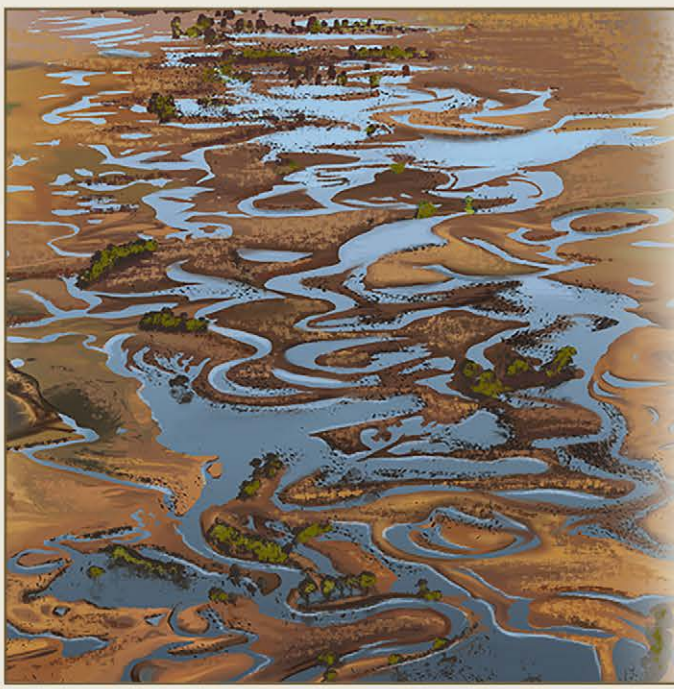


Biodiversity of the Upper and Mid Taiari River Catchment



Scroll Plain

The scroll plain is made up of oxbow lakes, swamps, marshes, and abandoned river bends. The rich earth of the valley floor reflects the geometry-the squares and circles-of modern agriculture. Yet the repo/wetlands at the heart of the plain retain their dense, boggy, impenetrable character. The upper Taiari is a vital traditional food-gathering site for Māori, who, for centuries travelled here from the takutai/ coast to harvest native waterfowl and fish, especially tuna/eels. In their legends, the twists and turns of the river were created by the movement of a taniwha, or guardian, called Matamata.

Native Waterfowl

Healthy wetland habitats are essential to native waterfowl. The Mānīatoto was rich in birdlife before farming was intensified in the 19th century. While pūtakitaki/paradise shelduck are still relatively common, tētē/NZ grey teal, whio/blue duck, tātā/kuruwhengi/Australasian shoveller, and koitareke/marsh crake are rare or locally extinct in Central Otago. One of the most secretive birds in Aotearoa New Zealand is the marsh crake, which hides amid rushes and wetland vegetation. The area was likely home to the flightless South Island goose (*Cnemiornis calcitrans*) which stood at 1 meter tall before its extinction in the 15th century.



Pūtakitaki | Paradise shelduck (*Tadorna variegata*)
Not Threatened

Kārearea | New Zealand falcon (*Falco novaeseelandiae*)
Nationally Vulnerable



Central Otago roundhead galaxias (*Galaxias anomalus*)
Nationally Endangered



Top Avian Predator

The kārearea are Nationally Vulnerable with between 5,000–8,000 individuals nationwide. They hunt in open country for introduced and native birds, insects and reptiles. Mammals are not a large part of their diet, unlike kāhū/swamp harrier. Kārearea nest in steppes, on steep slopes or rock ledges.

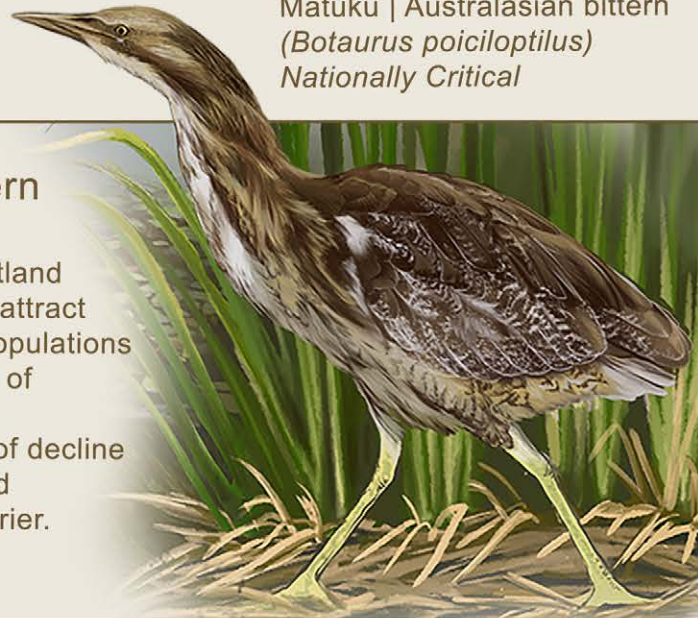
Galaxiids of the Taiari

The Taiari has more species of galaxiid than any other catchment in Aotearoa New Zealand. Non-migratory galaxiids tend to be found in tributaries of the river, where the water is clearer and the habitat less modified – and where trout are less likely to be able to survive. Central Otago roundhead galaxias (*Galaxias anomalus*) live in headwater tributaries of the Taiari with population strongholds in the Eweburn and Kyeburn. Land use activities and changes such as stock access to streams, reduction of native vegetation, and forest harvesting are also contributing factors to its decline.

Kākahi | Freshwater mussel (*Echyridella menziesii*)
Declining



Matuku | Australasian bittern (*Botaurus poiciloptilus*)
Nationally Critical



Matuku | Australasian Bittern

Matuku/Australasian bitterns are wetland specialists and boom like kākāpō to attract mates. They are skilled flyers, but populations are declining due to the degradation of wetland habitats and predation from introduced predators. Other factors of decline include starvation, vehicle strike, and predation by native kāhū/swamp harrier.

Skink Diversity

At least fifteen species of lizard live in the Taiari catchment. The Otago, grand and green skinks, once common throughout the region, are now down to just a few thousand individuals, while in the tussock uplands the burgan skink which is only found in the Taiari catchment, is also thought to be in decline. Mice, rats, and feral cats put major stress on skink populations. Reductions in native plants also reduces food and habitat availability.



Kōura | Freshwater crayfish (*Paraneophrops zealandicus*)
Declining



Kārara | Otago skink (*Oligosoma otagense*)
Threatened - Nationally Increasing



Green skink (*Oligosoma aff. chloronotus*)
Declining



Burgan skink (*Oligosoma burganae*)
Threatened - Nationally Vulnerable

Inland Saline Ecosystems

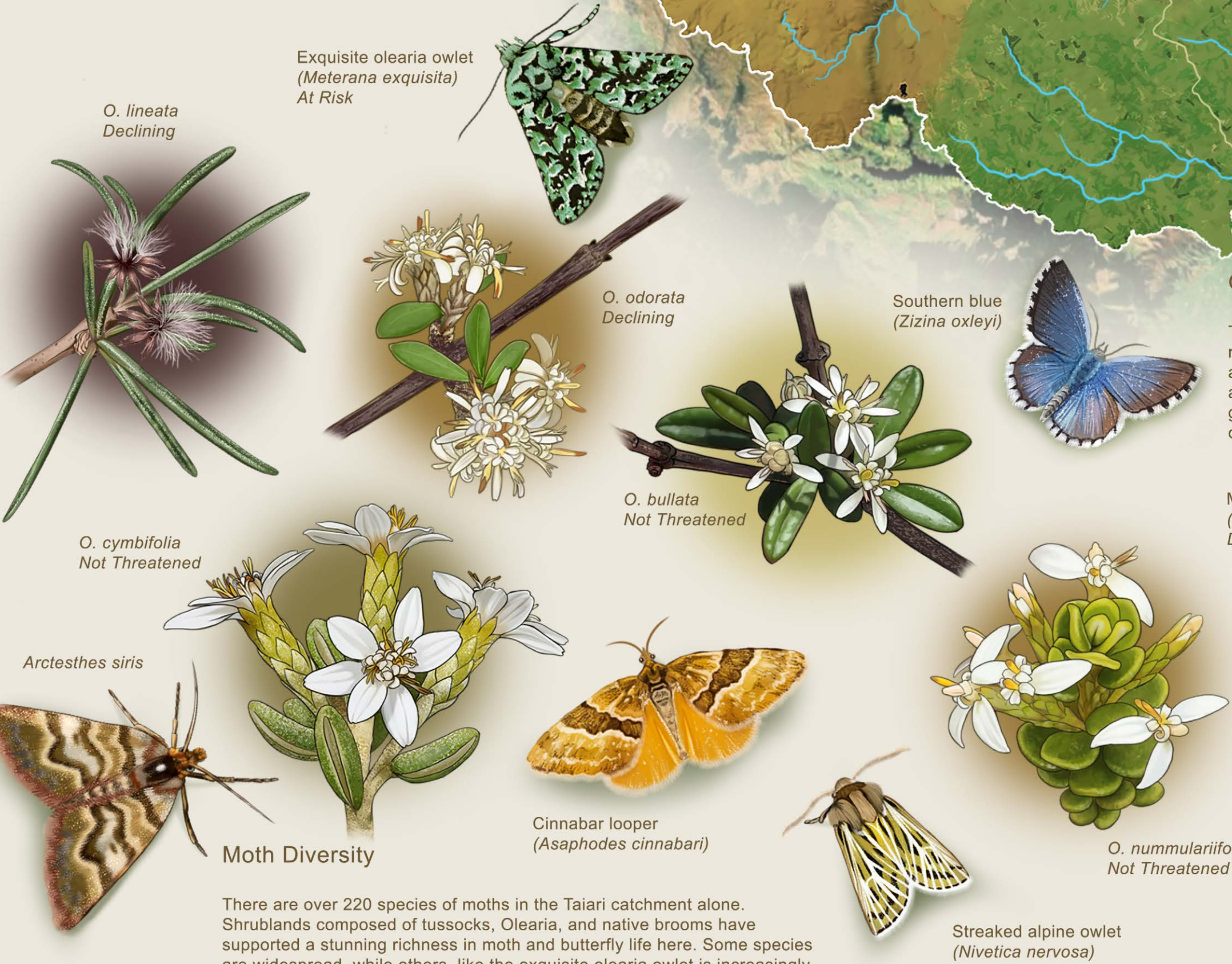
Saline soils contain salts originating from the gradual weathering of schist rock and from long distance sea spray drift that accumulates on flat areas of impenetrable subsoils in an arid environment. They are of huge ecological importance to highly threatened salt-tolerant plant species. Moths and butterflies thrive around the edges of Sutton Salt Lake, while birds feed on the specialized invertebrates.



Kirk's scurvy grass (*Lepidium kirkii*)

Grey Shrublands and Olearia Diversity

Grey shrubland habitat protects smaller herbaceous plants, reptiles, and insects from the elements while contributing to soil stability. The dryer shrubland hillsides host a great diversity of drought-tolerant plants such as Olearia, a genus with five species in the Taiari catchment. The Olearia genus is characterised by trees or shrubs up to 8 meters tall, each with different flowers, leaves, and associated insects. These plants are extremely hardy and a staple for insects like moths and butterflies, who pollinate their flowers and host their eggs within their branches. Skinks, geckos, and wētā use Olearia for shelter in the harsh Winters and Summer heat.



Exquisite olearia owl (*Meterana exquisita*)
At Risk

O. lineata
Declining

O. odorata
Declining

Southern blue (*Zizina oxleyi*)

O. bullata
Not Threatened

O. cymbifolia
Not Threatened

Arctesthes siris

Cinnabar looper (*Asaphodes cinnabari*)

O. nummularifolia
Not Threatened

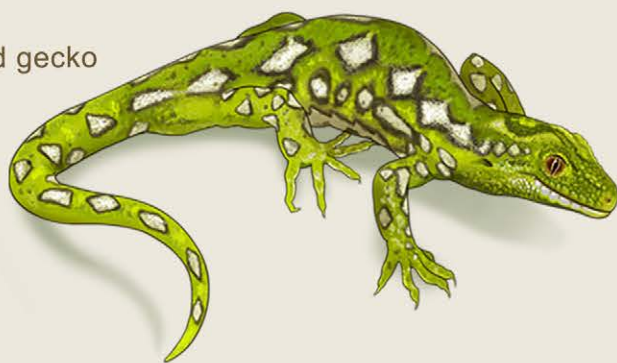
Streaked alpine owl (*Nivetica nervosa*)

There are over 220 species of moths in the Taiari catchment alone. Shrublands composed of tussocks, Olearia, and native brooms have supported a stunning richness in moth and butterfly life here. Some species are widespread, while others, like the exquisite olearia owl is increasingly rare because of its exclusive association with the Olearia genus.

Gecko Diversity

The shrublands are home to both skinks and geckos. The diversity of plants, rocky substrate, and soil moisture of shrubland supports many invertebrates and berries for jewelled geckos and Kōrero geckos to forage. Kōrero geckos are widespread across Otago and favour rocky environments. Jewelled geckos prefer to bask in shrubs and trees. Predation by introduced mice, cats, rats, and mustelids is a primary driver of their decline.

Moko kākāriki | Jewelled gecko (*Nautilinus gemmeus*)
Declining



Kōrero gecko (*Woodworthia*)
Declining



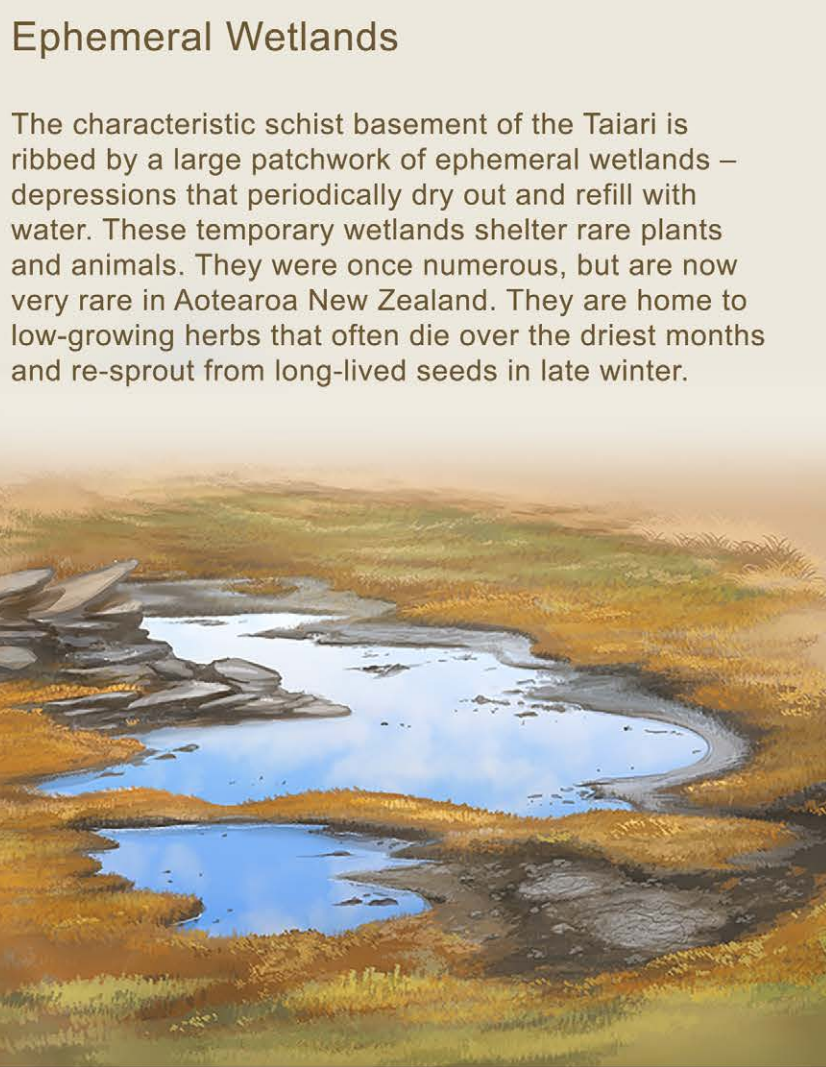
Mountain stone wētā (*Hemideina maori*)
Not Threatened



Coral broom (*Carmichaelia crassicaulis* subsp. *crassicaulis*)
Declining

Coral Broom

Although related to the invasive common broom, both coral broom and desert broom are rare and endemic to Aotearoa New Zealand. These plants are often browsed by sheep and rabbits, making them increasingly sparse and stunted in the landscape.



Ephemeral Wetlands

The characteristic schist basement of the Taiari is ribbed by a large patchwork of ephemeral wetlands – depressions that periodically dry out and refill with water. These temporary wetlands shelter rare plants and animals. They were once numerous, but are now very rare in Aotearoa New Zealand. They are home to low-growing herbs that often die over the driest months and re-sprout from long-lived seeds in late winter.

Tussock

Snow tussocks are the foundation of grassland habitats. We can think of them as the overstory of a forest of grass under which lives a multitude of small, delicate herbs and grasses. In their 'canopy', thousands of species of moths, beetles, crickets, grasshoppers, and flies live alongside flatworms, spiders, centipedes, millipedes, snails, weevils, earwigs, mealy bugs, aphids and ants. The vast array of invertebrate life in tussock grasslands make this habitat type a rich feeding ground for lizards, of which more than 15 species are known from the Taiari catchment.



Healthy Taiari

Healthy Taiari is an Upper Taiari Wai catchment group project, funded by the Ministry of Primary Industries' Integrated Farm Planning Accelerator Fund. Visit us at www.taiariwai.nz.

