

# Hawksbury Lagoon - the Birds

Back in the 1800s the “impassable swamps and lagoons” of “flax, raupo, toi-toi and stagnant water” of Hawksbury Lagoon held “swamp-hens, ducks, bitterns and white cranes”; “shy brown Matuku scuttled through the reeds and white kotuku fossicked in the mud”. By 1929 drainage for cultivation resulted in the land looking much like it does today and the Reverend J Christie wrote that “native game is now scarce, and only to be found in the remote solitudes” and he believed the “aquatic birds” were “destined ere long to extinction”.

He was almost but not quite right, for although native snipe have long gone, matuku (bittern) are no longer found the area, kotuku are but rare visitors and the native grey duck genes have almost completely been swamped by those of the introduced mallard, the 50 hectare remnant of that impassable swamp, Hawksbury Lagoon, can still attract well over a thousand ducks, geese and swans and other waterbirds.

The lagoons are very shallow, less than half a metre deep and parts often dry out over summer. Although the lagoon attracts large numbers of ducks and waders, breeding numbers are low. This is likely due to the lack of safe nesting sites as the margins of the lagoon are narrow and poorly vegetated and birds are liable to disturbance and predation by cats, dogs, ferrets and stoats.

In 1899 Hawksbury was gazetted as a Reserve for native and imported game. It is now a Wildlife Refuge.

**Little Shag / Koau Paka (native)** Little Shags can be all dark, white cheeked, or entirely white underneath and black above. A few birds can usually be found fishing or roosting on driftwood or in trees all year round.

**White-faced Heron / Matuku Moana (native)** Surprisingly, White-faced Herons only arrived from Australia in the 1930s and quickly became the most common heron in NZ, displacing the native Reef Heron on many estuaries and harbours. One or two birds regularly feed along the edges of the lagoon. They nest high in trees and occasionally do so in the nearby gums, macrocarpas and pines. Locally they are often called grey or blue herons.



adult  
Koau Paka  
Little Shag



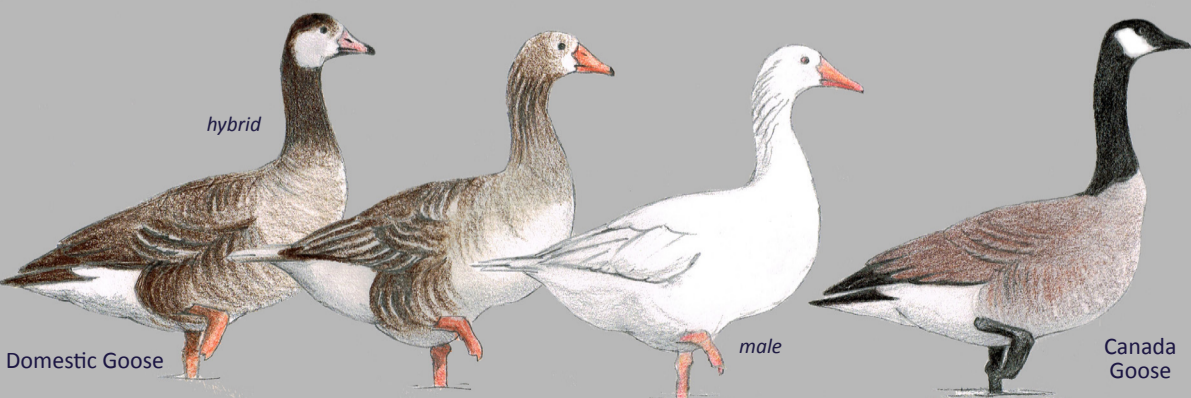
Matuku Moana  
White-faced Heron

**Domestic geese** were introduced by European settlers for food but nowadays are more likely to be viewed as a nuisance or a competitor with native birds. Numbers have been around 50 in recent years but have been much higher in the past and 280 were shot on the racecourse in June 2000. They used to be controlled by Fish & Game and the Wildlife Service, mainly by pricking eggs in the nest. This practice has been resumed lately in order to limit the competition with native species, reduce the damage to marginal vegetation and inconvenience on the nearby golf course and race course. Older males are white, females and younger birds browner.

**Canada Geese** were introduced into NZ in the early 1900s and quickly became common in the east of the South Island but it was not until 20 years ago that they arrived in any numbers at Hawksbury. They have steadily increased since and flocks of over 100 often appear in winter, probably moving down to the coast from colder nesting areas in Central Otago. Since 2012 a pair or two have nested, raising up to 11 goslings. Back in 2003/4, with fewer of their kind to choose from, a couple of Canada Geese hooked up with Domestic geese and odd looking intermediate hybrids appeared.

**Black Swans / Kaki Ānau** were introduced from Australia in the 1860s, though it also appears that some managed to cross the Tasman unaided. Black swans were first noted on the lagoon in February 1866 when, much to the annoyance of the Oamaru Acclimatisation Society, they abandoned the town and flew south to Hawksbury. By the following year Waikouaiti got its own four beautiful black swans, only to have some “sportsman or otherwise” scare them off with gunfire, whereupon they took to the sea off Matanaka where it was feared they would be dashed to pieces on the rocks. All was well eventually, if not for the future of wetlands and the adjacent farmland, and two returned for a brief visit in 1870. 10 graced the lagoon in 1874 and by 1888 the Otago Witness had ceased to bother with precise numbers and flattering adjectives, merely stating that a dozen were seen on the lagoon in August. Today numbers vary with water quality and the availability of food, but overall they have decreased in the last 25 years. The flocks of 200-450 present in the late 1980s & early 90s are now rare and numbers nowadays are usually around 10-40. Several pairs nest regularly, occasionally as late as April, and successfully raise cygnets. Young birds are greyish brown and only moult into black adult plumage when a year or so old.

**Mallard x Grey Duck / Pāpera** were introduced into New Zealand in the 1880s and quickly interbred with native Grey Ducks. However there is no mention of them at Hawksbury until 1897 when “Mallard ducks were released as part of a national project”. By 1898 the Otago Witness



Domestic Goose

hybrid

**Red-billed Gull / Tarāpuka (native)** is the common small gull of the NZ coast; the one that steals your sandwiches. A dozen or so Red-billed Gulls arrive in spring each year to nest on a couple of large old tree stumps surrounded by water and, when the water level is low enough, on clumps of debris in the shallows.

**Black-billed Gull / Tarāpuka (endemic)** Black-billed Gulls move to the Otago coast in late summer after nesting in inland Otago and Southland. Flocks of up to 250 use the lagoon to roost, bathe and preen during January and February. A few feed in the lagoon but most appear to fly well out to sea by day, returning to roost overnight or in stormy weather. Black-billed Gulls only occur in NZ (are endemic) and are considered “nationally critical”. The local coast is an important site and the 2,163 birds counted nearby at Karitane in March 2009, may be as high as 10% of the total world population. Black-billed Gulls are not easy to tell apart from the commoner, nesting Red-billed Gulls but look whiter and slimmer and have slightly longer bills and shorter legs. The names are not much help because young Red-billed Gulls have black bills and Black-billed Gulls can have reddish bills in autumn and winter.

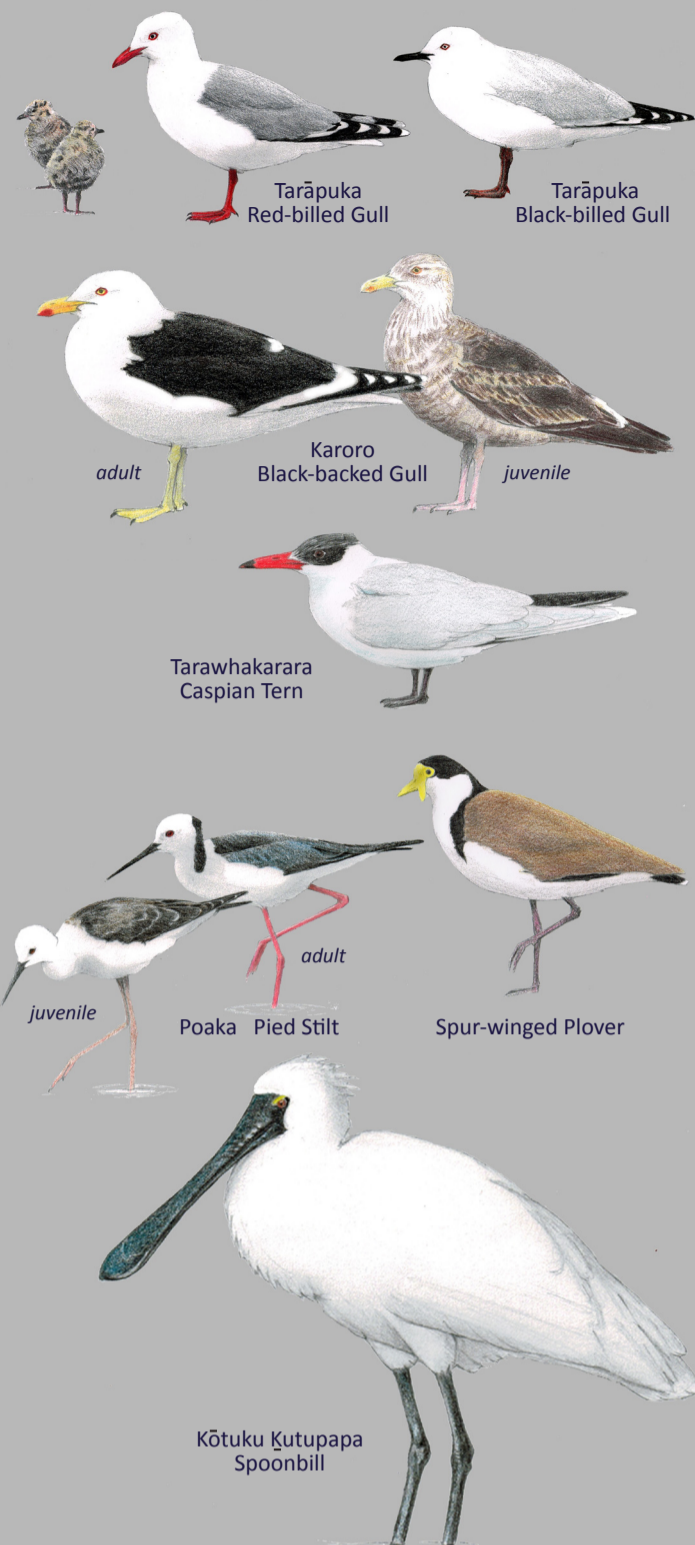
**Black-backed Gull / Karoro (native)** Several pairs of Black-backed Gulls began nesting on the broken causeway about 5 years ago and now appear to do so successfully most years. The brown young birds take 3 years to become as black and white as their parents.

**Caspian Tern / Tarawhakarara (native)** A large pale, gull like tern with a big red bill. One or two may occasionally be seen roosting with ducks and swans in the shallower water, more frequently after Christmas for a month or two when adults and young stop off on their way north after breeding further south, especially on the estuaries around Invercargill.

**Pied Stilt / Poaka (native)** If the water level is about the depth of their long shocking pink legs, then the lagoon is an important site for stilts moving between their breeding grounds and the coast. Flocks regularly exceed 100 in January and February and as many as 350 have been seen spread out feeding over the shallows. Pied Stilts often mate with the endangered NZ endemic Black Stilt, making their survival in the wild even more precarious and darker hybrid Pied/Black Stilts have turned up occasionally. Several pairs regularly nest in marshy ground and on driftwood and logs in the lagoon when the water level is low. A hundred years ago, Professor Hutton noticed “the absence of the stilt plovers from the lower Canterbury Plains from June till the end of August.” and the Otago Witness reporter added, “It is the same here, for whereas at other times there are hundreds to be seen on the Hawksbury Lagoon there is not one about now, and it would be interesting to know where they go.” As a result of a colour banding study we now know that birds from Otago go as far north as the Auckland harbours for the winter.

**Spur-winged Plover (native)** are another species that only recently arrived in NZ from Australia. Now a common and noisy bird of farmland, they first nested in Invercargill in the 1930s and reached Auckland by the late 1980s. They nest on nearby paddocks and a few birds can usually be seen feeding around the margins of the lagoon.

**Royal Spoonbill / Kōtuku Kūtupapa: (native)** Apart from a few birds nesting with the White Herons at Okarito, spoonbills were rare in NZ until the 1970s, when, starting in Marlborough, they spread throughout the country. Locally they nest on coastal cliffs at Moeraki, Taiaroa Head and Green Island and birds from these colonies and those further south, call in at the lagoon on their way to and from their winter areas in northern harbours. Highest numbers, up to 80-90, occur from February to May. Adults and recently fledged begging young birds with no crests, no yellow eyebrows and unwrinkled bills, often turn up in late summer.



Tarāpuka  
Red-billed Gull

Tarāpuka  
Black-billed Gull

adult  
Karoro  
Black-backed Gull

juvenile

Tarawhakarara  
Caspian Tern

juvenile

adult  
Poaka  
Pied Stilt

Spur-winged Plover

Kōtuku Kūtupapa  
Spoonbill

was able to report, “The lagoon is once more full, large numbers of wild ducks”. Male Mallards in breeding plumage are easy to tell from other ducks but hybrids and females are plainer and browner. Around 200 Mallard, Grey Duck hybrids (there are virtually no pure Grey Ducks or Mallard left in the country) are present throughout the year, numbers peaking around 6-800 in May and June. They nest regularly but many eggs and small ducklings are predated.

**NZ Shoveler / Kuruwheki (native)** Shovelers are present all year in the hundreds but numbers increase after the breeding season in summer and autumn and up to 1,000 have been seen in early winter, making Hawksbury an important site in Otago for the species. Only one or two pairs attempt to nest. Like many ducks, male Shovelers lose their bright plumage for a few months in late summer, when they look very much like the brown females. Shovelers have a large spoon shaped bill, fringed with small bristles (lamellae), with which they sieve out small organisms from the water. They prefer shallow, muddy, fertile, nutrient rich wetlands and sewage ponds, so much of Hawksbury Lagoon is ideal. There is no mention of them in the local history but in the past “spoonbills” almost always refer to this duck rather than the now familiar white Royal Spoonbill.

**Grey Teal / Tētē (native)** The smaller dumpy, brown, spotty duck with a white flash on upper wing when flying. Grey Teal were rare and local until the 1950s when large numbers arrived from Australia after several prolonged droughts. Enthusiastically encouraged by shooting interests who provided habitat and nest-boxes, they are now one of the commonest ducks on farmland ponds and wetland in the country. Numbers at Hawksbury are generally lowest, below 100, during the nesting season from August to December and highest, reaching 6-700, from late summer to mid winter. However numbers vary considerably with water levels; there can be as many as 600 or as few as 100 in January and they seem to prefer a muddy margin to feed upon. One or two pairs occasionally nest.

**Paradise Duck / Pūtakitaki** One of the few endemic birds to do well in farmland, they are now common throughout NZ. Virtually flightless for a few weeks when moulting in late summer, they were an important food for Maori. Numbers vary from a couple of noisy complaining pairs to flocks as large as 185. Flocks over 100 have been counted in March, April and May but also in spring, somewhat at odds with the accepted wisdom that ducks flock to safe refuges in time for the shooting season. Several pairs nest successfully each year and some 20 or so ducklings can often be seen together in a creche-like arrangement attended by just two parents. In 1905 a resolution was passed in Parliament to the effect that the Paradise duck, pigeon (kererū) and kākā, should be permanently

protected. Kākā and pigeon are now protected, more or less, but Paradise duck are still hunted in the shooting season. In the past they appear to have been rarer and in 1905 the Otago Witness reported “the rare and pleasing sight the other day of a flock of those birds on the Waikouaiti lagoon.”



Pāpera Mallard

female

male

Kuruwheki  
Shoveler

male

female

Tētē  
Grey Teal

male

female

Pūtakitaki  
Paradise Duck



Kaki Ānau  
Black Swan



## Hawksbury Lagoon - the Past

The area had been used since the earliest occupations, there being evidence of a Waitaha fishing village/camp between the lagoon and the sea. The lagoon and marshes were an important food gathering area.

The early settlers looked upon it very differently. When the ship Magnet arrived at Waikouaiti in the 1840s the settlers found the place they were expected to farm was a wilderness of strange plants. The swampy floor of the valley was thick with flax and they soon set about draining the land for agriculture. Although by 1857 it still took Johnny Jones over 10 hours to reach Waikouaiti from Dunedin and many supplies still arrived by sea to the beach, there was a long straight track, now Beach Street, through the middle of the valley.

While the fortunes of the likes of Johnny Jones improved, those of the local Maori did not. In the 1860s, "by the upper reaches of the Waikouaiti Lagoon, Matiaha Tiramorehu was waiting for Horomona Pohio. Before him the marshy reaches of the lagoon were dark where the tide had receded. The two chiefs met to talk about the probable demise of their people and the need to return to their ancient knowledge and values."

Use for traditional food gathering declined sharply at the time of the major reclamations and has since been limited to occasional eeling from channels and side streams. Now there is but a small ("2 acres, 3 roods and 20 perches"; equivalent to about 1 hectare) fishing easement within the lagoon. It was set aside for the preservation of mahinga kai in 1868 at the time of Kemp's purchase by the Native Land Court, along with another, named Tupare Koau (4ha) at the fork of the South branch of the Waikouaiti River.

By the early 1900s the lagoon looked much as it is now. The Racing Club was up and running and charging a fee for entry to its grounds. By 1903 the Domain Board had "completed the raising of the embankments along the canal and part of the lagoon. Three new bridges have been built across the canal, and the others repaired; a walk has been made through the plantation below Rothesay St, and that part made into a resort for visitors. The drains leading to the windmill have been attended to, and the pump improved and made more fitted to serve its purpose in draining the upper portion and



Lagoon from near Scotia Street, early 1900s

throwing the surface water into the lagoon. The lagoon itself has been kept full of water; but if it is to be successful as a boating lake it will require to be deepened, or a greater volume of water kept in it than at present. Many hundreds of willow cuttings were planted around the lagoon and along the canal. Most are growing, and the others will need renewing later on. A quantity of Marram grass was planted on the sandhills, so as to keep the drift of sand from filling up the canal seawards."

But it hadn't been easy. The first proposal in 1867 was to dredge the channel and open up the lagoon as a harbour, but it was considered impractical and expensive. A flood the following year drained out the lagoon to the extent that it was "greatly to be feared that unless some steps are taken to again dam the lagoon up, the health of the inhabitants of this and the adjoining township will be imperiled from the effluvia arising from the decomposing vegetable matter now exposed." The authorities acted with uncharacteristic speed, quickly damming the lagoon, but their efforts came to nought for the following year the lagoon was "wantonly or maliciously cut open on Sunday night, or early on Monday morning, a large quantity of its waters being emptied into the sea. As it is not many months since a sum of money was expended in damming up the mouth of the lagoon, under the supervision of the Hawksbury Town Council, it is hoped that the perpetrator of this act may be speedily apprehended, and summarily dealt with." He was Daniel Murdock was fined 5 shillings, and ordered to pay a sum of £5 costs for repair but subsequently got off on a legal technicality.

By 1875 there were "rival municipalities, and it appears one wants the Lagoon emptied in order that it may be planted in trees, and, ultimately, made fit for recreation, and the other wants to have the Lagoon as full as possible, so as to prevent the foul smells which arise whenever the bottom of the Lagoon is exposed."

The Harbour proposal resurfaced in 1881. "A 'Pioneer' who has given his mind to the formation of a harbour at Waikouaiti estimates the total cost would be £200,000 - Breakwater £50,000 dredging lagoon to railway station 30 feet deep £50,000, Pier and quays £100,000." This was followed almost immediately by the Domain Board "receiving three reports from Mr Barr with respect to draining the lagoon, the estimated expenditure for each scheme is £14,800, £1257 and £1000 odd." As ever, the lower quote was accepted by the Domain Board and attempts to drain the lagoon began that Spring.

By 1886 the issue even got into the Church News. "The Rev Mr Southam, who has removed to Lyttleton, has been replaced by the Rev Mr Parkes. Mr Southam must be only too delighted to get away from the smell of the lagoon, which he in common with a great many more in the borough was afflicted with for the last few years until the water asserted the rights of the inhabitants to fresh air against the caprice and whims of the Domain Board, not withstanding its expenditure of £1000 which has literally been thrown away."

What side of the debate the Rev. Mr Parkes was on or whether his sense of smell was as acute as his predecessor is not known, but attempts to drain and contain the lagoon were slow and unsuccessful, so much so that in 1901 the Domain Board and Racing Club resorted to a working bee. "The amateur navies gave a good account of themselves, but it was necessary to keep a gang of five or six men working for several days afterwards in order to deepen the channel. Even now it is questionable if the water will be entirely run off, as the scour is not strong enough to cut a deep passage through the long stretch of hard sand."

Though the emphasis nowadays is more on water quality and the environmental attributes of the lagoon, the situation with the outlet has

not changed much since. The smell is still a contentious issue and rather than the flooding of oats and wheat, the concern is now more on the water levels affecting the race course and nearby houses. In 2014 the Hawksbury Lagoon Society commissioned yet another report on the drainage options available to improve water quality.

On the first arbor day in 1892 "50 school children, Mayor, Councillors and Domain Board members were present and planted on the large bank on the east side of the lagoon with all sorts of trees, evergreen, deciduous, and native a total of 500 trees." Planting continues to this day, but now exotic trees are out, to be replaced by locally sourced natives.

By 1929 Reverend J Christie described a landscape not unlike today's: "Cultivation has almost entirely obliterated many peculiarities belonging to the past state of the country. Old settlers and visitors recollect impassable swamps and lagoons, where no such things now exist, and where a modern traveller would hardly imagine them to have been. The old aspect is all but gone; large and prominent features only remain. Flax, tussocks, reeds of raupo and toi-toi, Maori-heads and stagnant water, are all cleared away. These marshes were the domains of aquatic birds, swamp-hens, ducks, bitterns and white cranes. The drainage of cultivation having destroyed their retreats, the sportsman now looks for them in vain. Native game is now scarce, and only to be found in the remote solitudes, and destined ere long to extinction."

Several attempts have been made to replace the scarce "native game". Domestic geese were brought in for food by early European settlers. As early as 1867 the lagoon was considered a very suitable place for tench (fish) from Hobart Town but it wasn't until the late 1880s that brown trout were released into the lagoon. In 1897 mallard ducks were released as part of a national project.

The Lagoon was gazetted as early as 1899 as a Reserve for native and imported game under the Animals Act and by 1906 the Otago Witness proudly stated that "The Waikouaiti lagoon is a great attraction now to visitors and to passersby in the trains, who are pleased to see the great number of ducks and swans frequenting the lake. At times the surface of the lake is black with native game and they seem to be quite at home, and to know they are quite safe from molestation there."



When water levels are low the mud is covered with the small purple flowers of the New Zealand Musk (Thyridia repens)

# Hawksbury Lagoon Waikouaiti



Hawksbury Lagoon lies on the seaward side of Waikouaiti, about 35km north of Dunedin on State Highway 1, at Beach Street. The 64 hectare Wildlife Refuge, an "Area of Significance" within the Dunedin City and Otago Regional Council Plans, provides habitat for up to 2,000 ducks and other waterbirds, which can be seen from the causeways that cross the pools.

The Hawksbury Lagoon (HL) Incorporated Society, including a member from the Maori Reserves Trustees, was formed to 'enhance, protect and conserve the habitats of the wildlife and plant life within the environs of the HL and to encourage interest and appreciation of HL by local residents, visitors and special interest groups'.

For further information, or to donate, please go to: [www.hawksburylagoon.org.nz](http://www.hawksburylagoon.org.nz)