

# THE THREAT UNCONTROLLED SPREAD OF MANGROVES POSES TO THE MULTIPLE VALUES OF THE WHANGAMATA HARBOUR

## 1. Introduction:

i) The authors:

**John Adams:-** Worked in game bird management and fauna conservation roles for the NZ Wildlife Service from 1963 until its dissolution into the new Department of Conservation in 1987. During this period he was based in Wellington, Dunedin, Gisborne, Wairoa, Blenheim, Christchurch and Rotorua with occasional off-shore island work (Stewart Island, Cook Strait, and Hauraki Gulf, Bay of Islands and Chatham Island localities). This resulted in a broad practical experience in wetland conservation and development programmes as well the protection and management of threatened bird species.

In 1987 with the integration of the Wildlife Service into the Department of Conservation he worked initially out of Rotorua on game bird and fauna conservation. In 1990 he took up the position of Biodiversity Assets Manager for the Hawke's Bay Conservancy. Duties there involved the oversight of all the Conservancy's fauna and flora projects and included supervising Protected Natural Area surveys of all the ecological districts contained in the Conservancy. This work also involved negotiating the covenanting of recommended sites on private land and establishing and managing the Boundary Stream Mainland Island project and the Te Angiangi Marine Reserve.

The conservation of wetlands and waterbirds was a major interest and focus throughout John's working life and remains so today. He retired from the Department of Conservation in 2012 and is now a resident of Whangamata and a Committee member of Whangamata Harbour Care. He has been a financial member of the Royal Forest and Bird Protection Society for many years and was a member of the NZ Ornithological Society during all of his working life in Conservation.

**Graeme Webb:-** Banker for 40 years A recreational tramper, hunter and fisherman (salt and freshwater) and a long term committee member of Whangamata Harbour Care, Graeme has been associated with Whangamata all his life, holidaying with his family then retiring there in 1994. His family has connections with Whangamata, his turangiwaiwa since 1872. He remembers it well from the 1930's. He is a student of Whangamata's rich history and the geological history of the Coromandel Peninsula.

As a former member of the Ornithological Society he collated information for seabird mortality surveys, general surveys, predator control trapping etc. Since 1995 until the present time Graeme has observed, protected and collected data on the NZ dotterel populations along the Whangamata coastline. This has resulted in improved breeding success and public awareness with the formation and running of the local volunteer minder group.

In the mid 1960s Graeme was elected a Councillor of the Auckland Acclimatization Society, serving on all committees including the Fish and the Game Committees until 1977. This organisation specialised in wetland management and he successfully negotiated the retention of compartments of major swampland drainage schemes for the benefit of wildfowl populations. The Society was also involved in the protection of native birds and Graeme assisted the Wildlife Service, Department of Internal Affairs, with bird surveys, including those for banded rail in freshwater swamplands. In 1994 he became involved voluntarily in field work in the Hamilton area and was the first point of contact for the Dept. of Conservation for local bird issues on the Coromandel.

## **2. The Values of Whangamata Harbour for Birdlife:**

i). Anecdotal information indicates the numbers of waterbirds utilising the harbour historically far exceed the numbers that can be seen there today. The reasons for this are probably the same as for most wildlife habitats nationally. They include habitat loss and modification (through a variety of human and natural causes), introduced predators, human disturbance factors, increased sedimentation and pollution and the harvesting of food resources (cockles and pipis). We believe the rapid and increasing encroachment of mangroves into the harbour environs has also contributed to the decline of this as a waterbird habitat. In particular the numbers of waders (oyster-catcher, pied stilt, godwit and knot) utilising the harbour have significantly diminished. A reduction in the open estuarine mudflat areas available to them for feeding and more importantly the loss of high-tide roosting sites due to the encroachment of mangroves over former traditional roosting sites, are the most logical explanations for these decreases.

ii). Attached is a list of water birds currently known to utilise the Whangamata Harbour. This is by no means an exhaustive list as the habitat will no doubt have been visited by other species from time to time, particularly by vagrant migratory waders. It includes 9 species of waterfowl (duck, swan and geese), 4 herons, bittern, 4 species of shag, gannet, 6 species of gull and tern, 4 rails, 5 waders, Royal spoonbill, welcome swallow, fernbird and kingfisher. Thirty-six species in all. In addition there are also a number of native and introduced passerines that utilise the harbour and its fringing vegetation for a variety of feeding and nesting purposes e.g. tui, grey warbler, starling, Indian myna and harrier hawk.

The large majority of waterbirds listed utilise the harbour's open water areas and mudflats for feeding. With the exception of some introduced passerines and possibly pied shag, very few if any other birds listed actually utilise the mangroves for nesting and even fewer for feeding amongst. The rail species (pukeko, banded rail and the crakes) do utilise the mangroves as a feeding site, but not exclusively.

John Adams has personal experience observing banded rail on off-shore islands in habitats totally different to those found in North Island mangrove habitats. In 1964 one such island off Stewart Island (Big South Cape) possessed a dwindling population of banded rail that lived in sub-alpine scrub and tussocks along the top of the island. Unfortunately this population was rapidly wiped out by the Norwegian rat incursion but their presence there demonstrated that in the absence of introduced predators this species was more than capable of supporting viable populations across a very wide variety of habitats. All rail species listed (including banded rail) still occupy territories in a number of sites in New Zealand where there are no mangroves whatsoever. The importance of mangroves for banded rail has been over-stated and this is still evidenced today by the species survival in mangrove-free estuarine sites in the South Island. We consider the major threat to their continued survival in all New Zealand habitats is the presence of introduced predators. (cats, rats, hedgehogs, ferrets, stoats and weasels). Whangamata Harbour Care continues to devote considerable time and effort to controlling these pests and consider this is where conservation resources and efforts should be concentrated.

The authors also believe in the importance of preventing the further spread of mangroves and in maintaining large areas of open estuarine mudflats for feeding, resting and roosting habitat for all the other wildlife species listed. Either through misunderstandings, misinformation or oversight we believe insufficient weight has been given to the importance of such areas to the other waterbirds and too much weight to mis-informed opinion regarding the importance of mangroves for the survival of the resident banded rail population.

## **3. Other Values:**

Although the authors are primarily interested in seeing the current wildlife values of the harbour improved, we acknowledge there are a number of other values that would benefit from some judicious and well-planned control of the mangrove invasion. We do not consider the total removal of mangroves from the harbour practical, possible or desirable. The threat of on-going mangrove incursions will never go away. It will be here forever and the resources required to achieve agreed levels of control will be on-going.

Without going into any great detail, other values that would benefit from maintaining agreed levels of control are:

i). Recreation and Tourism: Mangrove encroachment reduces the available space for community activities that include waterskiing and jetskiing in the deeper channels, kayaking, wind-surfing, paddle-boarding and swimming. It will also reduce the available space for recreational fishing that includes the gathering of shellfish, whitebaiting, floundering, line fishing for snapper and kahawai and netting grey mullet.

ii). Fisheries: The harbour waters support large populations of shellfish, crabs and wet-fish. Many of the bird species listed feed on these and they're also a recreational food source for local residents and visitors. We can state with conviction the expansion of mangroves reduces the feeding areas available to all the wading species who **do not** like feeding amongst or close to tall vegetation that may be harbouring hidden predators. We are unsure as to the impact continued encroachment by mangroves is having on the various fish populations present.

iii). Cultural: - We believe a traditional take by iwi does occur but we have little information to support this or know to what level. What is certain is that until the 1930s (source, the late Mr Jim Watt) local and visiting Iwi seasonally used old fish trap methods in Patiki Bay to catch snapper, dogfish (shark species), mullet, flounder and eels. Eventually the spread of mangroves stopped this practice.

iv). Environmental: - The Whangamata harbour does contain significant intrinsic natural values. Wetlands include estuarine sites such as the Whangamata harbour, fresh-water and semi-saline lakes, rivers and streams and a variety of swampland types. Such wetlands have been severely impacted as a result of human activities, especially over the past 200 years. It has been reliably calculated that we have lost over 70% of our freshwater wetlands over this period and much of our remaining wetlands have been modified significantly. Whangamata harbour is no exception.

Much of the catchment has been logged of its former native forest (mainly for its valuable kauri resource) and is now in plantation pine forest. During the establishment phases and logging operations elevated levels of silt enter the contributing waters and settle out in the harbour. This occurs more severely when the harvest coincides with heavy rainfall events such as it did in March 2017. The resulting high levels of silt deposition from such events has a disastrous effect on the estuarine ecology by smothering the mudflat flora and fauna. Mangrove forests retain this silt and effectively stop the natural wind/wave action from dispersing these sediments into the water column and thence out to sea.

Other land management practices have also had harmful effects on the harbour. Roding, housing, and farming practices have all introduced changes in the levels of disturbance, pollution and sedimentation. In the absence of a monitoring regime it is impossible to determine what level of detrimental change has resulted to the environment, but we can safely state some has occurred.

iv). Social:- Public access to water edge sites. We believe there is already sufficient access to the harbour via the public reserves adjoining the towns residential sites. There is still talk about creating a boardwalk and walkway access up the townside and across the Moana Anu Anu estuary to the other side and back down to the causeway. This would be detrimental to the fringe saltmarsh habitats and its fernbird and banded rail populations.

The same applies to the suggestion there should be a track/boardwalk system right up the southern side to the head of the harbour which would encourage foot and cycle traffic (plus their dogs) through sensitive wilderness areas. We would support a small observation area at the head of the harbour.

#### **4. Recommendations:**

1. Prior to making submissions on the Coastal Management Planning process, Harbour Care identifies the areas they want to continue undertaking mangrove control efforts (or any additional sites they wish to extend the control to) and have these mapped.
2. That Harbour Care meet with other stakeholder representatives and attempt to reach agreement on our plans and seek their support through the process.
3. That Harbour Care completes a survey to establish possible refurbishment of former nesting sites of N.Z. Dotterel and Variable Oyster Catchers, plus the re-establishment of much needed high tide roosting areas for the wading bird species.
4. That Harbour Care continue to lobby for additional resources and assistance for their predator control programme.

John Adams and Graeme Webb

## Birds of Whangamata Harbour

black swan  
Canada goose  
mallard duck  
shoveler duck  
grey duck  
grey teal  
paradise shelduck  
NZ scaup  
brown teal  
white heron  
white-faced heron  
blue reef heron  
little egret  
Royal spoonbill  
Australasian bittern  
Australasian gannet  
black shag  
little shag  
little black shag  
pied shag  
black-backed gull  
red-billed gull  
black-billed gull  
white-fronted tern  
black-fronted tern  
Caspian tern  
variable oyster-catcher  
pied stilt  
NZ dotterel  
bar-tailed godwit  
knot  
pukeko  
banded rail  
spotless crake  
marsh crake  
fernbird  
kingfisher