



*Canada geese*

Complex relationships exist between all swamp species. Although changes may not directly affect one species, less obvious indirect effects may be involved through food chains. What is certain is that it is vital that New Zealand protects the wetland habitats it still has.

Only by doing this can we ensure the ongoing conservation of rare native birds and fish and the breeding of waterfowl, eels and whitebait in large enough numbers to sustain recreational hunting, the distinctive whitebait fishery and the valued wild commercial eel fishery.



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*Front cover: White faced heron chick*





At first glance, a wetland may not look very interesting, but don't be fooled! Wetlands are one of the most diverse habitats to be found in New Zealand, home to an amazing range of plants and animals.

Just take rushes and sedges, for example. These wetland plants look so much alike that it's hard to believe there are 47 species (16 native) of the Juncus species of rush and 94 species (73 of which are native) of Carex, the most recognisable of the sedges. Most of these are found in wetlands.

The importance of wetland habitat for birds is well illustrated by Lake Ellesmere (Waihora) in North Canterbury, where 149 bird species (47 per cent of all New Zealand's mainland and island species) have been recorded.

Photographs  
Top: Pukeko  
Middle: Mallard Duck  
Bottom: Bitterns

Wetlands aren't just swamps. They include a variety of habitats ranging from large lakes to ponds, swamps, peatlands and bogs, slow streams, pakihi wetlands, lagoons and estuaries. Their water can be fresh, brackish or salty. They also include the web of ditches, water races, mining pits and hydro lakes.

It's hard to imagine wetlands without the ducks, swans and other waterfowl that congregate there. Black and mute swans, scaup and duck prefer the open water, while grey duck, mallard and grey teal feed in the shallows. Wetland margins provide nesting sites for all species. Canada geese and paradise shelduck rest and nest in the margins, but graze in nearby pasture.

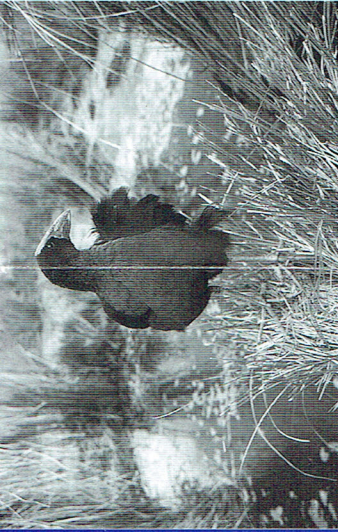
Wetlands are vital habitat for many other birds. Grebes and shags prefer open water, herons, and waders such as stilts and oystercatchers feed in the shallows and rails, bitterns and fernbirds are found in the emergent vegetation of the margins. These species breed in New Zealand and some, such as crested grebes, bitterns and rails are totally dependent on wetlands for their survival.

New Zealand's international wetland responsibilities are not just related to signing the Ramsar convention. Many of our wetland visitors are international travellers. Arctic waders and terns migrate south after breeding to winter in the Southern Hemisphere. Tens of thousands of godwits, sandpipers and others visit New Zealand's wetlands and estuaries each year.

Birds are the most visible of the wetland dwellers, but beneath the water's surface the rich tapestry of wetland life continues to unfold.

Deep swamps surrounded by thick flax, raupo and willows, their margins thick with water weeds, with soft margins and bottoms and deep, dark water breed secretive and mysterious fish. Very little is known about many of these species, some of which are now rare or endangered.

Swamp dwellers include the shortfinned eel, which is the main eel species found, mudfish, whitebait and kokopu. Rocky stream dwellers such as giant and redfinned bullies and torrent fish are sometimes also found in swamps. Koaro and lampreys travel through swamps to spawning areas and native freshwater flounder can be found in lowland swamps.



Whitebait hide in the swamp.