

# Wetlands of the Wimmera



After being drained and reclaimed for many years, wetlands are now recognised as one of the richest ecosystems on earth.

## WHAT ARE WETLANDS?

Wetlands are low-lying areas that are covered with water for at least part of the year; these include rivers and river flats, billabongs, lakes, swamps, estuaries, marshes and even farm dams. Wetlands can be further classified according to their depth, the permanence of the water body, the length of inundation, whether they are freshwater or saline, and the dominant vegetation, which can include sedges, herbs, lignum, cane-grass, reeds, cumbungi, paperbarks and gums.

Wetland habitats are usually teeming with life: insects, fish, reptiles, amphibians, crustaceans, mammals and birds. Many of these species are confined to wetland environments and are now threatened as a result of habitat loss or degradation. Waterbirds such as swans, ibis, coots and ducks are among the most familiar wetland inhabitants, but creatures such as tortoises, Water Rats, frogs, Platypuses and yabbies also rely on a watery habitat. Artificial wetlands can be constructed to recreate some of the functions of a naturally occurring wetland.

Sedges, waterlilies, Swamp Paperbarks (*Melaleuca ericifolia*) and majestic River Red Gums (*Eucalyptus camaldulensis*) demonstrate the huge range of wetland flora. In western Victoria, wetlands are often associated with River Red Gum and Black Box (*E. largiflorens*) communities. Tangled Lignum (*Muehlenbeckia florulenta*) surrounds swamps on clay soils such as Darlot Swamp and provides excellent bird habitat. The vegetation of saline lakes and salt pans is dominated by glassworts which form low open shrublands, sometimes in conjunction with Salt Paperbarks (*Melaleuca halmaturorum*).

Wetlands tend to have two major zones: the actual wetland area with its plants and animals that are perpetually or often inundated; and the shoreline or fringes of the wetland where soils are often water-logged but may dry out completely in summer.

## WHERE ARE WETLANDS?

Wetlands are dotted across western Victoria, the vast majority being in private ownership. An extensive series of lakes and swamps extends across the south-western Wimmera Plains, with salt lakes occurring in a depression running south from Mount Arapiles to White Lake and Centre Lake near Douglas. East of the Grampians are Bryan, Marney and Brady Swamps which are important for waterbirds such as the Glossy Ibis, Whiskered Tern and Brolga.

Many of the Wimmera's largest wetlands are on public land. These include Lake Albacutya (5000 hectares), an intermittently filled freshwater lake; Hattah-Kulkyne (1018 hectares), a series of lakes intermittently filled by Murray floods; and Lake Buloke (4000 hectares), an important duck habitat.

Most swamps of the volcanic plains have been drained and in the Western District there are many low-lying areas that would once have been delightful wetlands supporting rushes, reeds and resident swans and ducks. Victoria's water storage bodies also provide important wetland habitat.

## CONSERVATION IMPORTANCE

Wetlands support an amazing variety of plant and animal life, many of which can survive nowhere else. Victoria has lost a third of its wetlands since settlement. Loss or degradation of habitat has inevitably led to a loss of species. We are now starting to overcome the ignorance which once saw rubbish tips located on the edges of scenic swamplands and land cleared almost to the shorelines of lakes. Instead, wetlands are being re-created, planting programs are being undertaken around lakes and swamps, and experts are promoting wetlands and their importance as habitat for Brolgas and other birds.

In a global sense, some wetlands are important for birds migrating from as far away as China and Siberia. In the Wimmera, the saline waters and shores of Lake Wyn Wyn and nearby lakes support thousands of Banded Stilts for several weeks during their migration to south-eastern Australia. The Trust for Nature facilitated the conservation of Lake Wyn Wyn by co-ordinating an appeal to purchase private property surrounding the lake. Local naturalists are planting indigenous plants to rehabilitate the shoreline.

Wetlands play an important part in regulating and purifying the flow of water: acting as spongy filters, taking up water run-off, mitigating floods, reducing erosion, trapping sediments, recycling nutrients and gradually releasing water back into the system. In the past, drainage systems took little account of the environmental values of wetlands, and we must be sure that state and local planning schemes and policies address these values in proposed drainage works. The Wimmera Catchment Board and the Department of Natural Resources and Environment (NRE) have devised strategies to reduce nutrient loads in our water



bodies, ensure minimal environmental flows in the Wimmera River, promote streamside and floodplain rehabilitation, and investigate the development of a Catchment Drainage Strategy. Landholders are encouraged to become involved in either the planning or onground works.

Wetlands are also economically important. We eat the fish, crustaceans and shellfish from wetlands. Wetlands are often the source of water that sustains our agricultural and industrial base. A visit to any of our popular lakes such as Hindmarsh, Albacutya or Fyans also illustrates the recreational value of wetlands.

### MANAGEMENT ISSUES

There are many more subtle threats to wetlands than draining or filling, and these can have equally devastating effects. Alterations to natural wetland systems that affect river flow levels and water quality have wide-ranging impacts: for example, a lack of periodic flooding inhibits River Red Gum regeneration, and excess nutrient run-off causes toxic outbreaks of blue-green algae. The seriousness of our land and water degradation is shockingly illustrated in the case of Lake Hindmarsh. In 1985, 43 licensed commercial fishers made a living from this lake; today it supports only one, who mainly harvests introduced European Carp. In contrast, in a healthy wetland one ibis may eat up to 2000 insects a day, many of these pasture pests. Farmers are thus provided with free, non-polluting pest control.

Land-clearing and irrigation works frequently cause watertables to rise, bringing salts to the surface. Run-off from salt-affected areas can turn freshwater rivers, swamps and lakes into brackish environments no longer able to support the area's original flora and fauna or previous agricultural, recreational or tourism uses.

The impact of feral plants and animals in the Wimmera is perhaps less dramatic than the damage caused in tropical wetlands, but exotic fish such as carp, feral animals such as cats, rabbits and foxes, or pest plants such as Fog Grass and Blackberry have detrimental effects on wetland ecosystems.

The effects of past drainage and water supply works on wetlands have been devastating, many wetlands being virtually eliminated and others suffering a long, slow decline as a result of insufficient water flows or saline poisoning. Today, many local councils and catchment boards recognise the need to protect wetlands.



Southern Smooth Froglet (Illustrations by Brian Bainbridge)

### MANAGEMENT GUIDELINES

#### Fencing

The trampling of inundated areas by stock causes a great deal of damage to vegetation as well as affecting water quality. Grazing also inhibits regeneration of plants. It is possible to use wetland environments for stock-watering and still protect environmental values by fencing off the wetland and allowing only limited stock access. Using a dried swamp as summer feed for stock should be undertaken with due regard for seeding plants and regenerating trees and shrubs.

#### Weeds

Weeds often proliferate in areas with constant moisture and it is likely that the fringing wetlands vegetation may be weed-infested. Depending on the severity of infestation and the types of weeds, eradication may be appropriate. The use of herbicides near water bodies requires extreme caution (see below).

#### Revegetating

Often fencing out stock will allow natural regeneration to take place. However, if this does not occur, revegetation works may be needed to restore the area to its original condition. Determining what the original condition was may involve visiting intact habitats nearby and collecting propagating material. It is important that advice and permission, where appropriate, is sought from NRE in propagation and replanting programs so that suitable plants are used.

#### Enhancing the habitat

Dead trees and fallen logs and branches provide habitats for wetland creatures. Nesting boxes can provide habitats in areas where hollows are now scarce. This is particularly appropriate in artificial wetlands and dams. Creating a wetland habitat can be as simple as investigating levels and building low levee banks or walls and then waiting to see what visits your inundated area. However, it would be wise to investigate the different cover or water-level requirements of various species so these may be incorporated into your plan.

#### Pesticide, herbicide and fertiliser contamination

As many wetlands are surrounded by grazing or cropping land, it is important that the surrounding area is managed to reduce any polluting effects of pesticides, herbicides and fertilisers. Ideally, a substantial fringe area of the wetland should be fenced out with an additional buffer area managed sensitively. Frogs are susceptible to the surfactants used in glyphosate, so any spraying in the vicinity must be done with care. Consult the Trust for Nature or NRE staff for advice on appropriate products.

#### Covenants

Consider a conservation covenant to protect your wetland permanently, or other habitat management agreement, especially if your property supports a range of native plants and animals.

#### Land for Wildlife and Landcare

Register your property as 'Land for Wildlife' and receive newsletters and management assistance to encourage wildlife to your land. Consider joining your local Landcare group who are working to protect remnants and arrest land degradation.

compiled by Neil Marriott

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The Trust for Nature (Victoria) is an independent, non-profit organisation set up to help nature conservation on private land.

Since 1972, we have protected over 15,000 hectares of native habitat in Victoria through conservation covenants and land purchase. This has preserved the habitat of many of Victoria's threatened plants and animals.

Members and donors of the Trust provide vital financial support for our work.



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