

# WETLANDS

## HIDDEN WONDERS, HIDDEN COSTS



• Tiny snails are the most abundant creatures living in upper Derwent wetlands. As many as 7000 have been collected in a single sample.

### What is a wetland?

**W**etlands come in all shapes and sizes and include riverside marshes, tidal flats, swamp forests, buttongrass moorlands and seasonal frog ponds.

The key unifying feature of wetlands is that they hold standing water, either permanently or temporarily. If your feet are wet and muddy — you are probably standing in a wetland.

Specially adapted plants thrive in wetlands. Some, such as seagrasses and pondweeds, need to be under water at all times. Other plants, such as giant reeds, tea tree and swamp gums can tolerate a certain amount of dryness, as long as it doesn't go on too long. Wetlands are among the most productive ecosystems on earth, with higher rates of plant production than many forests and agricultural lands.

Many different kinds of animals are attracted to the water and plant life in wetlands. Frogs, water birds and platypus are well known residents. But many other species depend on wetlands as well, including many species of fish, reptiles and insects.

Wetlands act as natural sponges and filters, absorbing and stilling flood waters and filtering out sediments, nutrients and other pollutants. A large wetland can provide many of the functions of a wastewater treatment plant, and in many places, wetlands are now being constructed for just this purpose.



### Wetland threats and losses

Unfortunately, the value of wetlands has only recently been recognised. Recent economic valuation suggests that coastal wetlands — particularly those that support flood control, fisheries and recreational activities — have a value of well over \$1000/ha/year. Since European settlement, a large proportion of Tasmania's original wetlands have been drained or lost to reclamation, and the long-term effects of water quality, flooding and biodiversity can only be speculated. We need to look after our remaining wetlands and — where possible — consider re-establishing wetlands as important features in our landscapes.



• The Derwent has one of the largest eel populations in Australia. Mature eels migrate over 3000 km to breed and then die at a mysterious spawning ground somewhere in the South Coral Sea, off north Queensland. Their transparent young (glass eels) travel the same distance back to estuaries and rivers where they grow to maturity.

• Platypus are known to frequent the river and wetlands of the upper Derwent, feeding on the plentiful insect larvae, snails, crustaceans and worms found in muddy banks and channels.

### Places to visit wetlands

#### Derwent estuary:

No organised tours or activities. However, wetlands can be visited at a number of sites around the Derwent such as:

- Riverside walking track, Brighton
- Risdon Cove, Clarence
- Goulds Lagoon, Glenorchy
- Ralphs Bay (Lauderdale, South Arm, Calverts Lagoon), Clarence
- Kingston Stormwater Wetlands, Kingborough

#### Tamar Wetlands Centre

- West Tamar Highway, Riverside (10 min north of Launceston)
- Tel (03) 6327 3964
- Interpretation centre and boardwalk
- Wetlands tours and activities for school groups
- Free entry

#### Dismal Swamp

- Bass Highway (30 min south of Smithton)
- Tel (03) 6456 7199
- Ecotourism centre set in blackwood sinkhole
- Giant slide, maze-like paths and art installations (note: children must be over 8 years and more than 90 cm tall to ride slide)
- Guided tours for school groups
- Entry fee (discounts for school groups)

### Birds

Over 40 species of birds have been recorded in the upper Derwent wetlands, drawn by the abundance of food, shelter and nesting sites. Black swans and ducks are particularly abundant, gathering here in the thousands to feast on underwater grasses, particularly in late summer when wetlands in many other parts of the state are dried out. Swamp harriers can often be seen silently gliding over the marshes in search of waterbirds, small mammals, frogs and reptiles.

### Fish

Over 20 species of fish have been recorded in the upper Derwent estuary and associated wetlands, including bream, trout, mullet, eel and whitebait. The wetlands provide critical breeding and nursery habitat for the group of small transparent fish known as whitebait. Whitebait migrate upstream each spring to spawn and take shelter in estuarine wetlands and mudflats. These whitebait runs are a key driver for the annual sea trout runs and provide a meal for many other predatory fish and eels. At one time, the Derwent supported an important whitebait fishery, but commercial fishing was suspended after fish stocks plummeted in the 1950s.



### Wetlands of the Upper Derwent Estuary

**T**he Derwent wetlands between Granton and New Norfolk are particularly rich and diverse, including large areas of marshes, underwater grasses, tidal flats and reed beds. These wetlands support large populations of fish, platypus and waterbirds, including thousands of black swans that can be seen feeding on either side of the Bridgewater Causeway, particularly during summer months.

The Derwent River Conservation Area was established in 1941 to protect these wetlands, but is only partially effective as many of the wetlands are privately owned.

In 1997, we nearly lost 40% of these wetlands when a farmer started draining a 66 hectare marsh known as Murphy's Flat. The Derwent Estuary Program (DEP) sought funding from a consortium including the Australian and State Governments, Derwent Valley Council and Norske Skog (Boyer paper mill). Fortunately, this wetland was able to be bought for inclusion in the conservation area.



- Floods were a frequent hazard for New Norfolk, until the hydro dams were completed in 1973. The biggest flood occurred in April 1960, leaving over 650 people homeless. Many had to be rescued from rooftops.
- Most of Hobart's drinking water comes from the Derwent River and is purified at the Bryn Estyn treatment plant several kilometres upstream of New Norfolk. The Derwent catchment delivers one of the cleanest water supplies in Australia.



### Acknowledgements

This feature was prepared as part of the Derwent Community Wetlands Project with support from the Australian Government Envirofund, Derwent Estuary Program partners, the Tasmanian Conservation Trust and The Mercury NIE section.

The Derwent Estuary Program (DEP) is a regional partnership between local governments, the Tasmanian state government, commercial and industrial enterprises, and community-based groups to restore and promote our estuary. The DEP was established in 1999 and has been nationally recognised for excellence in coordinating initiatives to reduce water pollution, conserve habitats and species, monitor river health and promote greater use and enjoyment of the foreshore. Major sponsors include: Brighton, Clarence, Derwent Valley, Glenorchy, Hobart and Kingborough councils, the Tasmanian state government, Hobart Water, TasPorts, Norske Skog Boyer and Zinifex Hobart Smelter.

**Pictures**  
General: Christine Coughanowr  
Black swan: Bill Wakefield / Els Hayward  
Heron: Kim Eisele  
Design: Tim Squires



### Wetlands fight back

While wetlands may appear to be green and peaceful havens, some can turn ugly if disturbed.

Many coastal wetlands contain naturally high levels of iron sulphide minerals, laid down in wetland soils over thousands of years.

These acid sulphide soils are harmless as long as they remain

underwater. If the wetland is disturbed however — for example as a result of dredging or wetland drainage — the sulphides may break down, producing sulphuric acid. The resulting acidic run-off has been known to cause massive fish kills and mobilise heavy metals, a particular concern in the Derwent.



### Wetland Websites and Activities

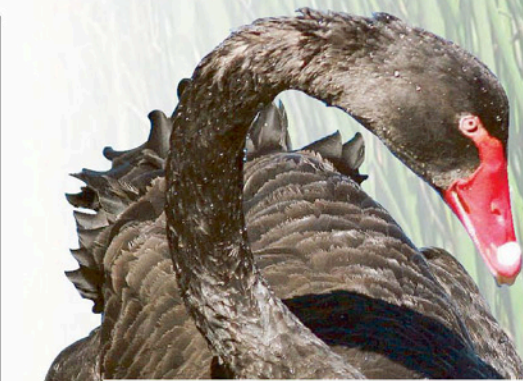
Department of Primary Industries, Water and Environment — Natural Environment, Wildlife, plants, threatened species.  
[www.dpiwe.tas.gov.au](http://www.dpiwe.tas.gov.au) (go to Natural Environment)

Department of Environment and Heritage — Wetlands home page  
<http://www.deh.gov.au/water/wetlands/>

Wetlands Centre Australia  
<http://www.wetlands.org.au/>

Wetlands International  
<http://www.wetlands.org/>

World Conservation Union  
<http://www.iucn.org/themes/wetlands/>



- An infamous inn was once located within the wetlands along the Lyell Highway. Known variously as Addington Lodge and the Golden Fleece, it was reputed to be haunted before finally torn down in the 1940s.
- Despite Governor Arthur's efforts to tame the wetlands at Murphy's Flat, their name is thought to be ultimately derived from the Irishman who wrecked the tidal gates while celebrating the Governor's departure from the colony.