Native Fish in Coastal Victoria

HEALTHY COASTAL CATCHMENTS – HEALTHY COASTAL FISH

Fish habitat: **Wetlands**

Pale Mangrove Goby – photo courtesy of Tarmo Raadik

What are wetlands?

Wetlands include lakes, billabongs, swamps, salt marshes, bogs and peatlands that hold permanent or temporary water. They are different from rivers and estuaries in that the water is mainly static (i.e. it doesn't flow). The water in them can be fresh, brackish or salty.

Wetlands can vary in size from small temporary ponds to large lakes that can be hundreds of hectares in size.

From a fish habitat perspective, there are two types of wetlands. Floodplain wetlands are those that are connected to rivers during high flows and are critical parts of the river ecosystem. Non-riverine wetlands are generally isolated from rivers and only have a limited capacity to act as fish habitat, however remnant populations of fish may persist there or migratory species such as eels, which can move over land, may use these waterbodies periodically.

Why are wetlands important for fish?

Wetlands are highly productive habitats when filled, providing an extensive and complex variety of habitats and food sources for many aquatic organisms including fish. Wetlands can provide important nursery habitats for a number of juvenile fish (including Dwarf Galaxias - *Galaxiella pusilla*, Australian Smelt - *Retropinna* sp., Australian Mudfish - *Neochanna cleaveri*, Pale Mangrove Goby - *Mugilogobius platynotus* and Glass Goby - *Gobiopterus semivestitus*) as they provide suitable shelter areas from large predators and high flows, and they have an ample supply of food. Wetlands, are also important temporary habitat for species such as Short-finned (*Anguilla australis*) and Long-finned Eels (*A. reinhardtii*), which are able to move across terrestrial environments looking for water after a river or wetland has dried.

Photo courtesy of Michael Smith

Wetlands are also indirectly important to fish and other aquatic organisms as they provide vital ecosystem services. Wetlands:

- Enhance water quality by acting as sediment and nutrient filters prior to water entering rivers
- Act as natural retarding basins and assist in reducing erosion by absorbing and slowly releasing floodwaters
- Provide a source of organic matter for rivers, including structural woody habitat, detritus that is used by aquatic macroinvertebrates and larger food items such as insects which can be washed into the river during floods, and
- Provide a source of water and food for terrestrial fauna including birds and mammals.

WETLANDS

Lowland Burrowing Cray – photo courtesy of Greg Hollis

Photo courtesy of Kris Pitman

WETLANDS

What is happening to our wetlands?

Wetlands in many parts of coastal Victoria have been drained to make way for agricultural, industrial and urban development. It is estimated that almost 4000 natural Victorian wetlands (c.191 000 ha) have been removed since European settlement.

Wetlands have also been substantially impacted by changes to the flow regimes of rivers, changes to groundwater height (e.g. through the use of centre pivots) construction of levee banks, channelisation, salinity, grazing by livestock, increasing nutrient loads and the use of wetlands for water storage.

These threats can impact both small and large wetlands all of which are important to the health of terrestrial and aquatic species, including fish.

How can you help?

If you have a wetland on your property you can conserve and improve its health by:

- Minimising the impact of livestock through fencing the wetland and controlling the amount of grazing. Provide water troughs, rather than allowing livestock direct access to the wetland for drinking. Stock can cause soil compaction and erosion, increase nutrient levels and spread weeds.
- Avoiding draining remnant wetlands no matter how large or small. If you are considering installing centre pivots, consider the wider environmental implications of drawing on groundwater – this may be important water for nearby wetlands, even if they are not on your property. If possible enable rivers to reconnect with natural floodplains, and
- Allowing previously cleared wetlands to naturally re-establish by removing drains, allowing connections between rivers and floodplains, and controlling weeds through selective grazing and other measures.

Australian Mudfish – photo courtesy of Tarmo Raadik

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