LAND FOR WILDLIFE
VOLUNTARY WILDLIFE CONSERVATION

Land for Wildlife Queensland: Note W3

Wildlife Friendly Dams

Whether their original purpose was for watering stock, irrigation or as a landscape feature, all dams can provide habitat for a surprising amount of native wildlife. This Note discusses how, through the provision of suitable habitats, a range of fauna can be encouraged to colonise a dam. Just imagine yabbies, fish, frogs, a wide range of insects such as butterflies and dragonflies, birds, reptiles and mammals living in your dam!

Watching the comings and goings at your dam often reveals what species are breeding and when seasonal migrants have arrived. During times of high rainfall, and with the subsequent overland runoff, many dam fauna (such as yabbies, turtles, eels and fish) can travel large distances over normally dry land to reach new habitats. If you are lucky enough to have a dam that overflows, take the time to go out at night and shine a spotlight over the overflowing water to see what is moving up or down stream. The location of a dam in relation to other water sources and habitat will strongly influence what wildlife you are likely to encounter in a farm dam. As discussed in *Land for Wildlife Note W2 - Healthy Dams*, how you maintain your water quality and dam vegetation will also influence what wildlife colonises your dam.

Shallow dam edges and mud flats may attract a range of wading birds such as Black-winged Stilts.

Dam fish

While the idea of wetting a line in your dam and reeling in a whopper may be an attractive one, there are a number of factors that you need to consider prior to stocking a dam with fish. The Queensland Department of Employment, Economic Development and Innovation (DEEDI) brochure, *Stocking Fish in Farm Dams and Other Waters on Private Land*, is a useful guide as to what fish might be suitable for your dam and is available from your local Land for Wildlife Officer or by contacting DEEDI.

It is also essential that you refer to the DEEDI for a current list of declared noxious fish as it is illegal to introduce these species into Australian water ways.

Following are some basic guidelines:

- Only introduce fish species that are native, occur naturally in your local catchment and are preferably supplied from a local source.
- Keep in mind that any fish that are introduced to a dam are likely to escape in times of high flow.
- A fish-free dam will generally support a higher population and diversity of frog species.
- Ensure that there is a suitable food source available for the selected fish species.

Dam frogs

Frogs are often referred to as 'environmental indicators' because habitats with a variety and/or abundance of frogs are usually healthy. Therefore, monitoring frogs in your dam may allow you to keep a check on the health of your dam. It's fascinating to listen to the evening frog chorus and note the varying times and climatic conditions that stimulate different species to call. For those who are keen, CDs of frog calls (available from your local library or book store) will help you to identify the frogs in your dam. A healthy frog population will also attract frog predators such as herons, cormorants, egrets and snakes.

Often the first species of frog to colonise a new dam or pond in South East Queensland will be the Striped Marshfrog (*Limnodynastes peronii*). However, if a range of habitat niches are provided (such as dense reeds along the banks and a seasonally inundated shallow section) more species will colonise the dam.

A major threat to the native frog population is Chytridiomycosis or Amphibian Chytrid Fungus Disease (*Batrachochytrium dendrobatids*). Chytridiomycosis is a highly infectious fungal disease that has spread through frog populations worldwide and may cause up to 100% mortality in some populations. As yet there is no cure, although research is being done on a range of antibiotics and anitfungals that can protect frogs. Moving tadpoles and frogs increases the risk of spreading this very serious disease. For this reason it is strongly recommended that you **do not introduce tadpoles or frogs into your dam or pond**. If you provide the habitat, frogs will eventually move in of their own accord.

Naked Treefrogs, also known as Ruddy Treefrogs or Red Treefrogs (Litoria rubella) *are frequently found around dams following rain throughout Queensland.*

Unfortunately Cane Toads (*Rhinella marina*) also find dams ideal breeding sites. By maximising dense and low vegetation around the waters edge you will favour native species and make access more difficult for Cane Toads. Keep an eye out for toad eggs, which can be readily identified by their unique jelly-like strands. If you are confident they are Cane Toad eggs then it is important to remove them before they hatch. Simply lay the egg strands out in the sun to dry, making sure that they cannot be washed into another water course.

Dragonflies are one of the more common insects seen around dams and waterways. Dragonfly larvae are aquatic and feed on mosquito larvae. Photo by Darryl Larsen.

Dam invertebrates

Healthy dams provide habitat for a great diversity of aquatic invertebrates, especially the larval or juvenile stages of some insects, as well as water spiders and flying insects such as dragonflies and damselflies. Dragonfly and water beetle larvae also help control mosquito larvae. Many invertebrates provide food for fish, frogs, birds and Platypus. As with all groups of fauna, a high diversity of species is an indicator of a healthy environment that is able to offer a variety of food, shelter and breeding resources.

Dam birds

A healthy dam will invite a range of bird species, although only very large dams are likely to provide the full range of habitat requirements necessary for birds to breed. Visiting waterbirds will also inadvertently introduce plant and animal life (including weeds) to your dam, carried on their feet and in their feathers. Heavily vegetated dams are likely to be more attractive to smaller forest birds such as honeyeaters, finches and fly-catchers that come to drink, bath and feed on insects. Dense reeds and sedges may encourage visits from Buff-banded Rails, cisticolas, grassbirds and Australian Reed-warblers. Dams in areas with an open flight path are most likely to be visited by ducks and other water birds such as spoonbills and grebes. Dams with good perching sites nearby may attract birds that prey on fish and frogs such as kingfishers, darters and the nocturnal Tawny Frogmouths.

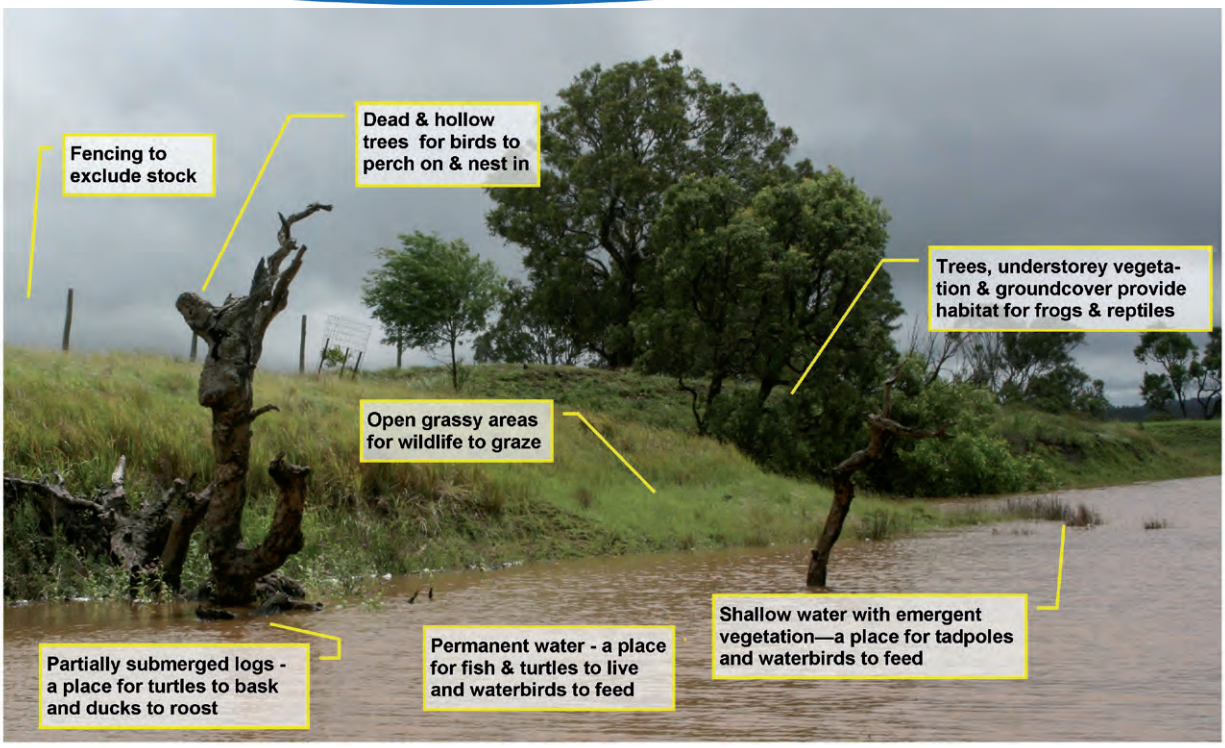
Eastern Water Dragons will often colonise dams with well-vegetated verges and exposed basking sites.

Partially submerged logs and rocks provide roosting and basking sites for birds and turtles as well as underwater habitat for aquatic animals.

Dam reptiles

Some snakes such as the Green Tree Snake (*Dendrelaphis punctulata*), Keelback (*Tropidonophis mairii*) and Red-bellied Black Snake (*Pseudechis porphyriacus*) will swim in dams to feast on frogs. Eastern Water Dragons (*Physignathus lesuerii*) will also colonise dams with well-vegetated verges and exposed sunning spots such as semi-submerged logs. Such logs are also favoured sunning spots for freshwater turtles. Many freshwater turtle species have the ability to move overland and seek out new habitats, such as the Eastern Snake-necked Turtle (*Chelodina longicollis*) and Saw-shelled Turtle (*Elseya latisternum*), making them the most likely colonisers of newly created habitats. However, Krefft's River Turtle (*Emydura krefftii*) appears to be the most tolerant of dams.

Keep a lookout for the introduced Red-eared Slider. This turtle has a distinctive red stripe behind the eyes, which fades as the animal ages. The turtle is very aggressive, and will out-compete native species for food and space and is a **Class 1 declared pest animal**. If you find a Red-eared Slider, contact your Council Environmental Officer or Biosecurity Queensland on 13 25 23 as soon as possible. A photograph and more information on the Red-eared Slider can be found in *Land for Wildlife Note G5 - Responsible Pet Ownership*.



Dams can provide important habitat for a diversity of wildlife.

Dam mammals

In high rainfall catchments where Platypus occur naturally, dams (usually spring fed) can be inhabited by Platypus. When dams overflow creating a navigable water course that flows into an existing Platypus habitat, young males will move upstream in search of a suitable territory to claim as their own.

Another group of mammals that find dams attractive habitat are insectivorous micro-bats, which can often be seen swooping low over the surface of the water to drink and feed on invertebrates. Installing bat boxes on a tree near your dam will encourage insectivorous bats (see *Land for Wildlife Note A2 - Nest Boxes*). You may also be fortunate to have wallabies and kangaroos come to visit and drink from your dam.

What you can do

- ✓ Provide logs and rocks as roosting and basking sites for birds and reptiles.
- ✓ Preserve large living and dead trees near dams.
- ✓ Preserve or establish a range of different types of vegetation around dams including tussocks, shrubs and trees.
- ✓ Retain groundcover of logs, rocks, leaf litter and ground vegetation cover.
- ✓ Restrict livestock access by fencing off dams and installing off-stream watering points for livestock.
- ✓ Create a filter zone in the inflow area adjacent to your dam by retaining or planting local native sedge species to trap nutrients and other pollutants.
- ✓ Keep records of wildlife sightings.

Land for Wildlife is a voluntary program that encourages and assists landholders to provide habitat for wildlife on their properties. For more information about Land for Wildlife South East Queensland, or to download *Land for Wildlife Notes* free of charge, visit **www.lfwseq.com.au**

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