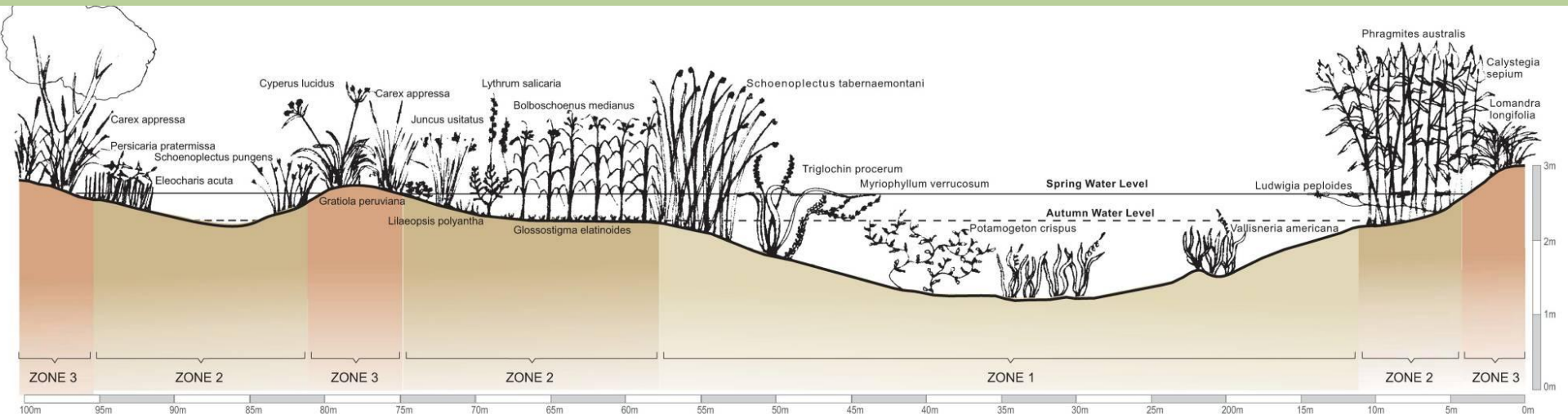
Turning your Dam into habitat

By Damien Cook

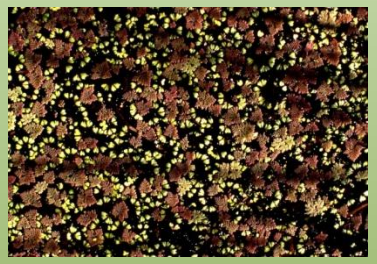
Depending on their particular habitat needs wetland animals will be found in different habitats within a wetland, from damp margins to deeper water.



An important part of wetland habitat is wetland vegetation. Wetland plants come in a range of life forms

- Submerged

- Floating non-attached



- Floating attached

- Emergent

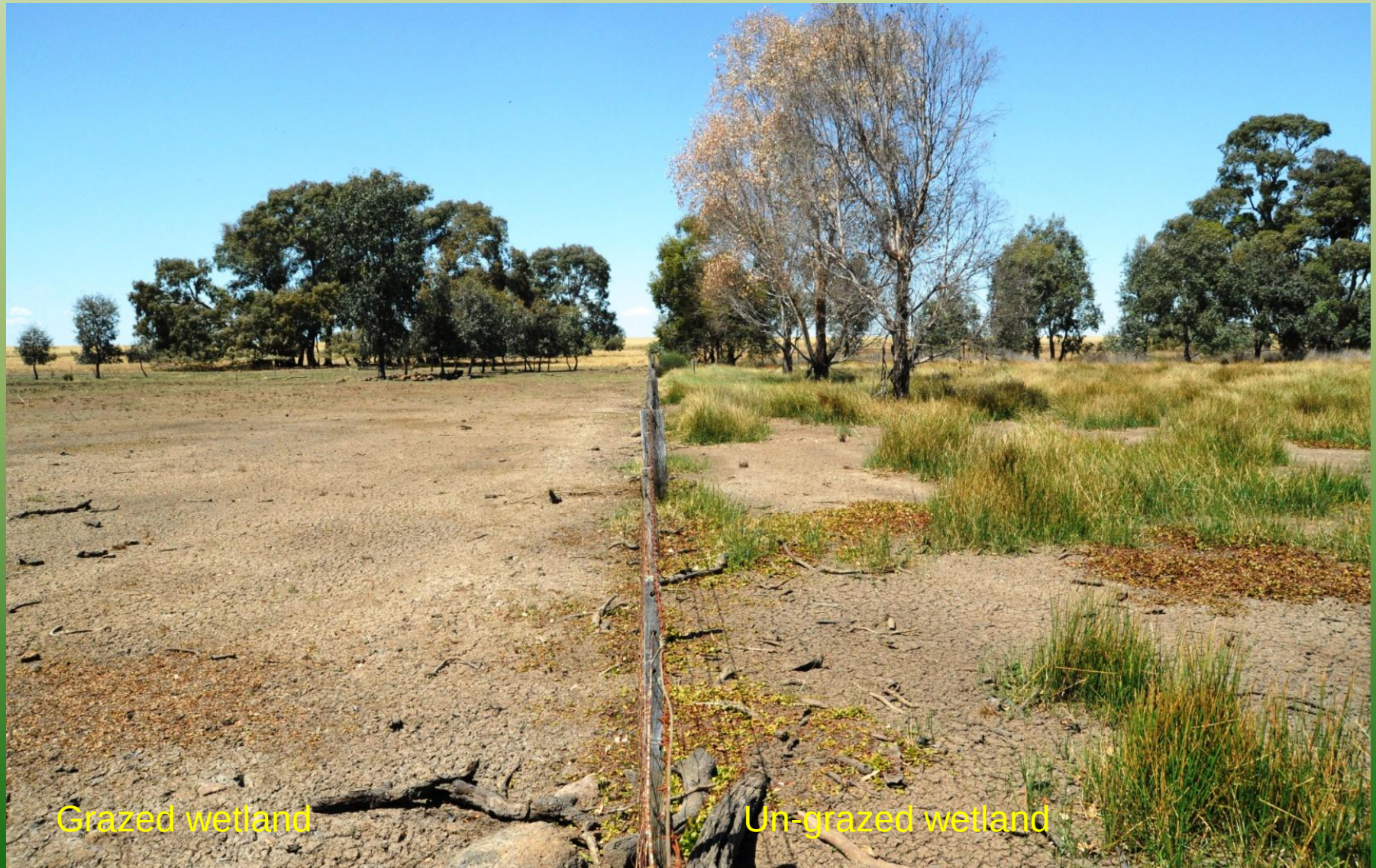
- Mudflat colonists

- Woody species- trees and shrubs

To manage wetland habitats on your property

- Retain and re-plant indigenous vegetation, particularly wetlands and water courses
- Maintain natural hydrology. Do not drain wetlands or block wetland overflows. Wetting and drying of wetlands is important for nutrient cycling, plant recruitment and maintaining diversity
- Minimise nutrient and chemical run-off into wetlands and watercourses. This can be achieved by establishing vegetated buffers, which ideally should be 50 meters wide or more. However, even narrow buffers are useful
- Maintain micro-habitat diversity, avoid cropping in or around and removing logs, rocks and leaf-litter
- Control and prevent the spread of pest plants and animals
- Manage grazing to protect native vegetation. Fence off wetlands and water courses and avoid grazing when they are inundated

Grazing can reduce or eliminate wetland vegetation cover, removing the habitat of frogs and the invertebrates they require for food



Avoid “tidying up” around wetlands. Fallen timber, leaf litter, rocks and dense tussock grasses all provide important habitat for wetland animals

Think about what animals like in a wetland

- Shallow edge gradients, lots of micro-habitats
- A diverse range of wetland plants to provide cover from predators, sites for egg-laying and habitat for prey species
- Rocks, logs, leaf-litter and tussock grasses and sedges
- Clean water
- Wetting and drying

Find a reference site

Find an ecologically intact wetland or waterway nearby with similar characteristics (soil type, water depth, salinity) to the area you are planting. Study of this site will provide important clues as to what species should be used and where they should be planted.

Planning your frog habitat creation project

1. Design your wetland habitat, draw a plan, decide what to plant and what other habitat you can provide such as rocks and logs

2. Source the plants, you may want to collect your own seed and grow them yourself

3. Prepare the area for planting- dig the pond or modify existing dam, control weeds and prepare soil for planting

4. Install plants and other habitat

5. Guard the plants from water birds

6. Control weed invasion and pest animals

7. Relax and enjoy watching your habitat develop

Seed Collection

- Ideally seed should be collected from as close to the planting site as possible
- Importance of provenance varies from one species to another, as some species have dispersal mechanisms that allow seed to move long distances.
- Seed ripening and fall peaks from early summer to autumn for many species
- Seed collected should be genetically diverse, of the correct species, ripe and free of contamination of weed seed

Plant Propagation and Planting Formats

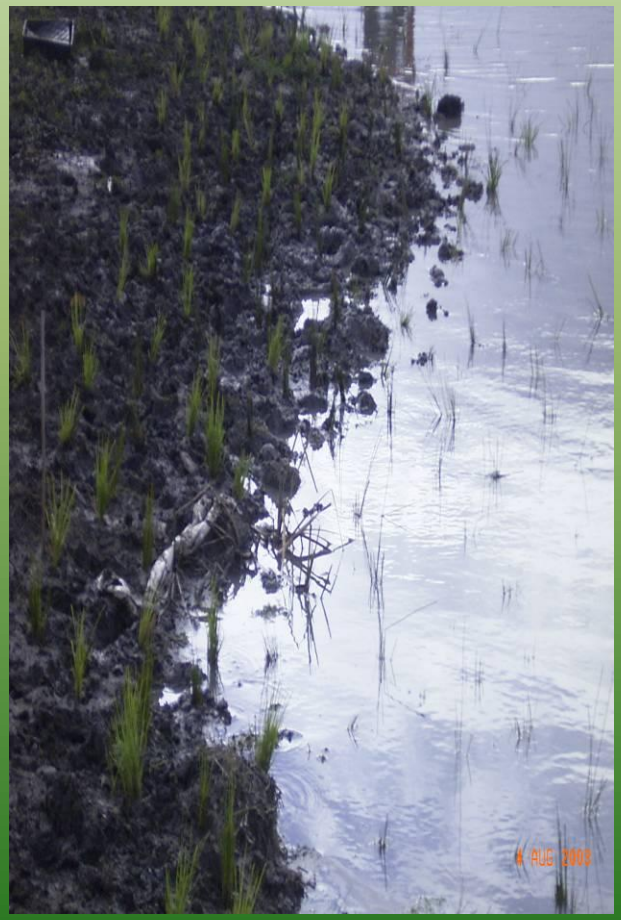
- 6 to 12 months lead time required for propagation
- Chose formats which suit the growth form of each species. For example tussock-forming species such as *Carex appressa* or *Juncus pallidus* are cost effectively produced in hikos (above), while rhizomatous species such as *Ranunculus papulentus* (below) grow best in trays or 3” pots
- For aquatic species avoid small volume containers such as envirocells as plants produced in these are too small to survive prolonged inundation and bird grazing

Most dams are dug into subsoil and are difficult to establish plants in. It is difficult to improve the animal habitat value of this type of dam without the creation of planting benches, which are best created when the water level is low.

Planting benches can be established from the high water level down to about 1 meter deep. They should consist of topsoil with at least 5% organic content.

Plant Establishment:

Timing and density of planting are critical for good establishment of native vegetation



- If planting density is too low indigenous plant cover will be sparse and this will allow the invasion of undesirable exotic species, increasing maintenance needs
- If plants are installed during the wrong season they may fail to grow or require additional maintenance such as manual watering
- Plant aquatics spring/summer; optimum density 2-4 per square meter
- Plant terrestrial/edge plants late autumn/early spring; optimum density 5-6 per square meter.

Plant Establishment- zonation

Plants must be placed in correct water depth. For deep water aquatics it is often better to place young plants in shallower water and allow them to spread to deeper areas.

Plant Establishment:

Protecting plants from water birds

- Many herbaceous species of aquatic plants are highly palatable to water birds when they are young
- Unless protected from grazing birds these species will often fail to establish
- Temporary enclosures can be used to protect young plants until the are established enough to tolerate grazing pressure, which usually takes about three to six months.