

Dams to habitat

Farm dam restoration for the Growling Grass Frog

Fact Sheet - October 2008

Background

The Growling Grass Frog (*Litoria raniformis*) historically occurred throughout much of Victoria, however it has shown marked population declines in recent decades. The frog is recognized as a threatened species at state, national and international levels.

The threatening processes that are driving these declines are poorly understood, but are likely to include chytridiomycosis caused by a fungus and habitat modification or degradation.



The growling Grass Frog.

A **new project** aims to address the decline of frogs by gaining a better understanding of its habitat preferences and by using this information, to create new habitat close to existing populations.

Study area and methods

The project study area will be within the following Catchment Management Authority regions:

- Glenelg-Hopkins
- Corangamite
- Wimmera
- North Central
- North East
- West Gippsland
- East Gippsland

Water bodies around known frog populations will be visited three times per breeding season (between October and January) over four breeding seasons (2008/09 to 2012/13). Habitat features will be measured at each site (Box 1).

To survey frogs, a standard frog survey protocol will be used at night. The number of calling frogs per site will be estimated and the number of individuals will be counted and categorised as an

adult or sub-adult. Tadpoles will also be surveyed, to determine if breeding has occurred.

Box 1. Habitat features measured at each water body

- salinity
- pH
- turbidity
- extent of aquatic vegetation
- surrounding vegetation
- availability of refuge habitats
- surrounding land use
- connectivity between water bodies

Habitat creation

The Growling Grass Frog is often found in farm dams and irrigation channels in rural landscapes. Previous work suggests that certain habitat features influence whether frogs will be present in these waterbodies. Favourable habitat features are abundant aquatic vegetation, minimal tree canopy cover and salinity less than 7.0 mS/cm.



A) A farm dam used by Growling Grass Frogs. Note the aquatic vegetation and surrounding areas of long grass that frogs can use as refuge.

B) A farm dam less suited to Growling Grass Frogs. There is no aquatic vegetation in the dam and little refuge habitat in the areas surrounding the dam.

Farm dam restoration for the Growling Grass Frog

Observations suggest that there is often unoccupied aquatic habitat (e.g., farm dams) close to waterbodies with Growling Grass Frogs. We propose making simple modifications (planting aquatic vegetation and creating refuge habitat) to farm dams that are close to known populations to encourage natural colonisation.

Over time as we learn more about the frog's habitat preferences, we can tailor the habitat modifications to better suit the frog.

Management outcomes and project links

The project will allow us to prescribe simple management actions that can be used to create more viable habitat for Growling Grass Frogs in a time of climate change. Broad implementation of the management actions should provide a positive conservation outcome for the species. The project can link with existing habitat restoration projects, such as:

- Landcare
- Habitat 141
- Catchment Management Authority
- Community initiatives

Further reading

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