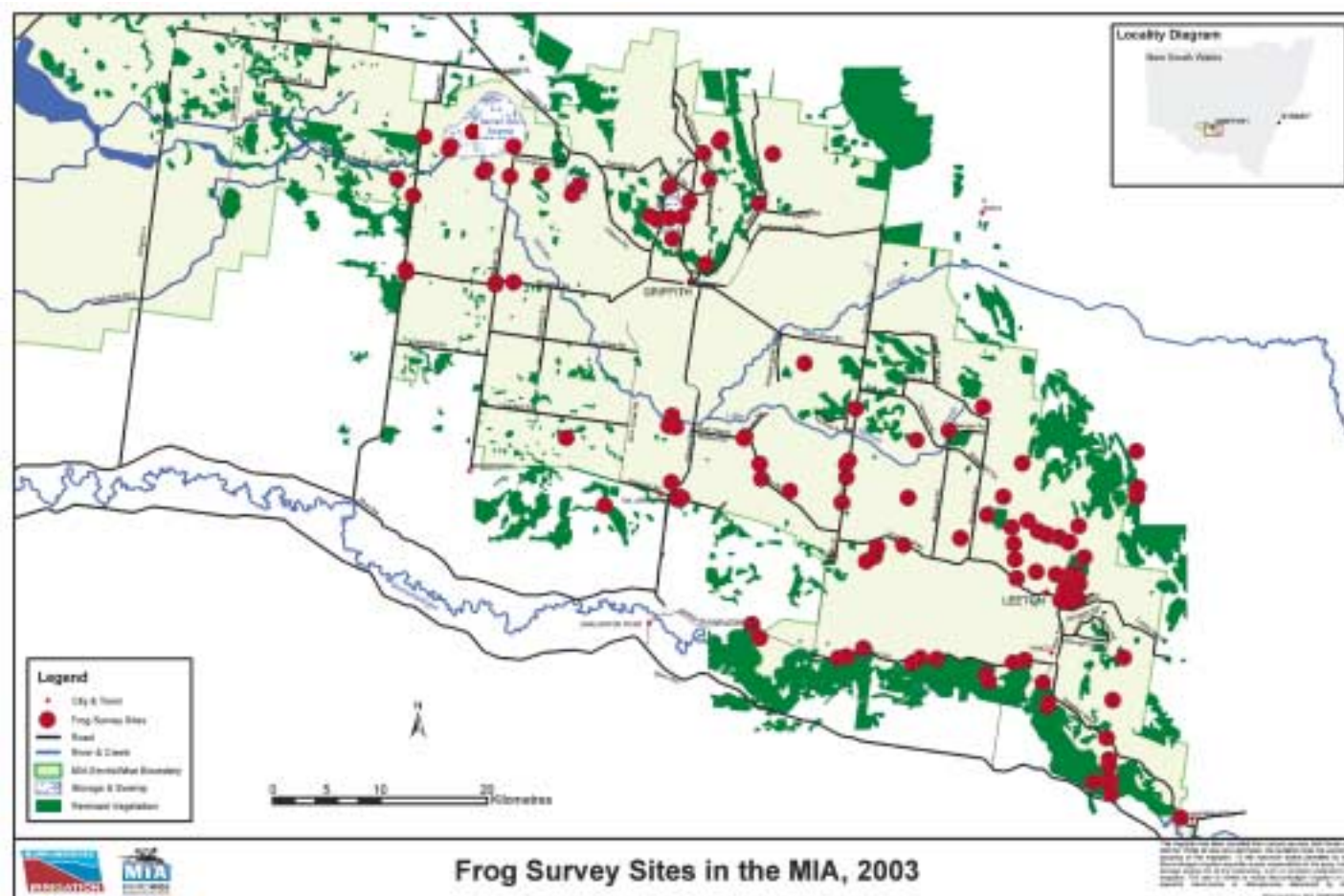


Frog species of the Murrumbidgee Irrigation Area

| | Common Name | Scientific Name | Status in MIA * | Habitat |
|----|--------------------|-----------------------------------|-----------------|---|
| 1 | Spotted Grass Frog | <i>Limnodynastes tasmaniensis</i> | Very Common | All aquatic environments |
| 2 | Barking Marsh Frog | <i>Limnodynastes fletcheri</i> | Very Common | All aquatic environments with abundant vegetation |
| 3 | Giant Pobblebonk | <i>Limnodynastes interioris</i> | Common | Dams & depressions on hills. Also large wetlands. |
| 4 | Eastern Banjo Frog | <i>Limnodynastes dumerilii</i> | Not recorded | Dams & depressions on hills. Also large wetlands. |
| 5 | Plains Froglet | <i>Crinia parinsignifera</i> | Very Common | All aquatic environments |
| 6 | Sloane's Froglet | <i>Crinia sloanei</i> | Rare | Dams and depressions in hill areas |
| 7 | Peron's Tree Frog | <i>Litoria peronii</i> | Common | All aquatic environments with fringing vegetation (trees) |
| 8 | Broad-palmed Frog | <i>Litoria latopalmata</i> | Rare | Billabongs in River Red Gum forest |
| 9 | Green Tree Frog | <i>Litoria caerulea</i> | Not recorded | Billabongs in River Red Gum forest, urban areas |
| 10 | Southern Bell Frog | <i>Litoria raniformis</i> | Not recorded | Channels and rice bays Coleambally Irrigation Area |
| 11 | Common spadefoot | <i>Neobatrachus sudelli</i> | Uncommon | Dams and depressions in hill areas |
| 12 | Wrinkled Toadlet | <i>Uperoleia rugosa</i> | Uncommon | Shallow, well vegetated wetlands, including rice bays |
| 13 | Crucifix Frog | <i>Notaden bennetti</i> | Rare | Ephemeral depressions after heavy summer rain |
| 14 | Bibron's Toadlet | <i>Pseudophryne bibronii</i> | Rare | Dams and depressions in woodland areas |

*Based on surveys by Charles Sturt University 2003



Frog Survey Sites in the MIA, 2003

Frogs in the MIA



Background

Frogs are an important part of the biological diversity of an area. They feed on insects, spiders and mites and can be identified by a distinctive mating call that is often heard on warm nights after heavy rain. Some species of frogs can be sensitive to the condition of their habitat, and surveys of frogs have been used in some cases to provide a simple assessment of the health of aquatic environments. Surveys of frogs have recently been conducted in aquatic environments in the Murrumbidgee Irrigation Area (MIA) as part of the MIA EnviroWise Biodiversity Program.

Objectives

The objectives of conducting frog surveys in the MIA include:

- Improve knowledge of distribution and abundance of frogs in the MIA
- Establish baseline information of frog populations for ongoing monitoring
- Determine presence of threatened frog species
- Improve awareness of frogs and their habitat
- Identify opportunities for improved management of frog habitat and aquatic environments

Methods

Wetlands, irrigation channels, rice bays, dams and depressions were identified for surveys. Audio surveys were conducted at night and this involved listening for chorusing frogs and recording the species present. Calls of some species were played on a tape recorder to entice all resident species to call.

Active searching around the edge of wetlands amongst vegetation, under timber and rocks was also carried out. Tadpole surveys and habitat assessments were conducted during daylight to assess vegetation, grazing pressure, and water quality.

Surveys were conducted during spring and summer 2003 and after periods of heavy rain, by consultants from Charles Sturt University (CSU). A field day was also held at Fivebough Swamp in Leeton to help people identify local frog species.

Results

Of the 14 species of frogs likely to occur in the MIA (based on NSW NPWS Wildlife Atlas), 11 species were recorded during the 2003 survey period. Those species likely to occur but not identified included the Green Tree Frog, Eastern Banjo Frog, and Southern Bell Frog.

The most commonly recorded species included the Spotted Marsh Frog, Barking Marsh Frog, Peron's Tree Frog and Plains Froglet, and they were found in all aquatic habitat types. Dams with abundant vegetation and small

rain-fed depressions contained the greatest diversity of species, while wetlands (natural depressions of significant size) and channels contained the least number of species.

With the exception of conductivity, there was no significant difference between the water qualities at each of the survey sites, however, low diversity and abundance of frogs was evident at wetland sites with high conductivity. A significant positive relationship was found between habitat condition scores and frog species diversity.

What you can do

To help maintain our local diverse frog populations, it is important to:

- Reduce grazing pressure around water bodies
- Maintain some vegetation around water bodies
- Maintain good water quality and low salinity
- Maintain temporary wetlands with drying phase
- Maintain range of aquatic habitat types

Improved habitat conditions for frogs are also likely to mirror improved conditions for other aquatic organisms. Rehabilitation of local wetlands such as Fivebough Swamp in Leeton and some of the river lagoons has commenced in recent years and will go some way in helping to preserve local frog populations.

What's next?

It is intended that similar surveys will be repeated in the future to help monitor frog populations in the MIA. Surveys will be conducted in the western part of the M.I.A. when conditions are suitable. Improved management of aquatic environments should encourage greater diversity of frogs in the MIA in the future.

The results of this survey are detailed in the CSU report "Frog Diversity in the MIA: A Baseline Survey" May 2004, by S.Wassens, S.Sass, L.Thompson, and G.Swan.

This project has been funded by the National Action Plan for Salinity and Water Quality (NAP) and the Natural Heritage Trust (NHT). For further information about the MIA EnviroWise Biodiversity Program, please contact Louise Harrison at MI on phone 02 69620200.



Frog species of the MIA



Spotted Grass Frog
Limnodynastes tasmaniensis
Photo: Michael Mahony



Eastern Banjo Frog
Limnodynastes dumerilii
Photo: Harry Hines



Barking Marsh Frog
Limnodynastes fletcheri
Photo: Geoff Swan



Plains Froglet
Crinia parinsignifera
Photo: Michael Mahony



Giant Pobblebonk or Banjo Frog
Limnodynastes interioris
Photo: Michael Mahony



Sloane's Froglet
Crinia sloanei
Photo: Harold Cogger



Frog species of the MIA



Peron's Tree Frog
Litoria peronii
Photo: Marion Anstis



Broad-palmed Frog
Litoria latopalmata
Photo: Geoff Swan



Southern Bell Frog
Litoria raniformis
Photo: Michael Mahony



Crucifix Frog
Notaden bennetti
Photo: Geoff Swan



Green Tree Frog
Litoria caerulea
Photo: Murray Eliis



Bibron's Toadlet
Pseudophryne bibronii
Photo: Michael Mahony



Wrinkled Toadlet
Uperoleia rugosa
Photo: Marion Anstis



Common Spadefoot Toad
Neobatrachus sudelli
Photo: Geoff Swan