

Summary of Results

The prolonged drought that has been affecting the ACT and surrounding NSW Region for the past several years was evident at a number of sites. Of the 137 Frogwatch sites monitored in 2008, 27 of them were dry and/or did not yield any evidence of frog activity. Conversely, some sites that had become dry in previous years had received some rainfall and run-off and were showing signs of recovery after both drought and bushfire (Figure 4).

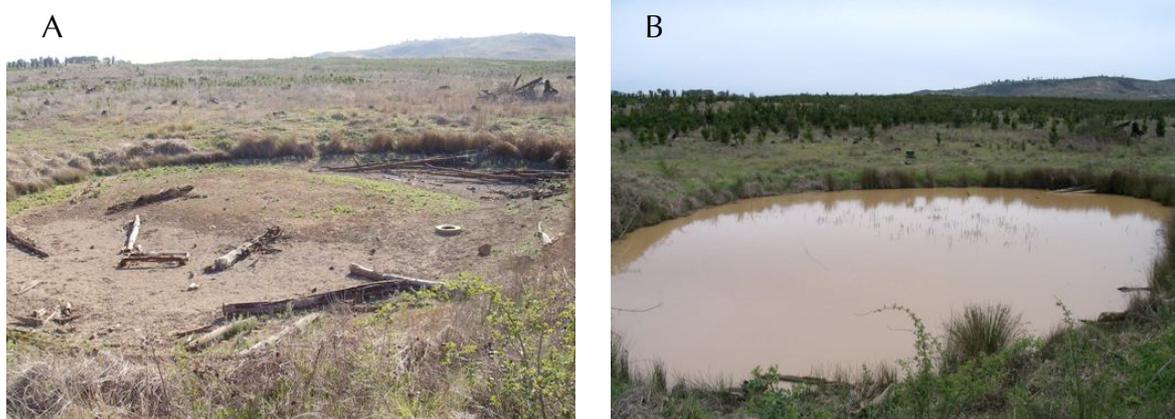


Figure 4. Frogwatch site SFF100 (Stromlo Forest retention dam) in 2006 (A, photo by R. McConville) and 2008 (B, photo by A. Meadows).

Species Detected

A total of 9 species were detected throughout the ACT & Region this spring (Table 1). The three most commonly-detected species were the **Spotted grass frog** (*Limnodynastes tasmaniensis*), **Plains froglet** (*Crinia parinsignifera*) and **Common eastern froglet** (*Crinia signifera*). These species were present in at least 50% of the monitored sites in 2008 (Table 1).

The **Spotted burrowing frog** (*Neobatrachus sudelli*) was detected at one Frogwatch site in 2008, which is the first census record of this species since 2005. This species undergoes aestivation, which is a type of hibernation, in response to relatively warm and dry conditions. Aestivating frogs create an underground burrow and secrete a watertight cocoon from sloughed skin in order to inhibit evaporative water loss during dormancy. These frogs require significant rain events in order to arouse from aestivation and escape from the underground burrow, therefore it is not unusual for these animals to remain underground for many years at a time during protracted drought conditions. It is encouraging that the census was able to detect this species in 2008 despite the continuing dry conditions in the region.

The **Green and Golden Bell frog** (*Litoria aurea*) was previously detected at one site during the 2006 Frogwatch census. This species is nationally threatened and has vanished from much of its former range, including in the ACT. It was not detected during the 2008 Frogwatch census.

Table 1. List of frog species detected during the 2008 Frogwatch Census, and each species' overall abundance in the ACT and surrounding NSW region.

Species	Detection Frequency 2008 (no. sites)	% of Sites 2008	Mean Detection Frequency 2002-07 (no. sites)	Mean % of Sites 2002-07
<i>Limnodynastes tasmaniensis</i> (Spotted grass frog)	79	58	71 ± 35	54 ± 18
<i>Crinia parinsignifera</i> (Plains froglet)	78	57	65 ± 29	51 ± 11
<i>Crinia signifera</i> (Common eastern froglet)	68	50	71 ± 31	58 ± 16
<i>Limnodynastes dumerilii</i> (Eastern banjo frog)	40	29	38 ± 18	33 ± 14
<i>Litoria verreauxii</i> (Whistling treefrog)	32	23	21 ± 12	17 ± 6
<i>Litoria peroni</i> (Peron's treefrog)	31	23	32 ± 17	23 ± 9
<i>Uperoleia laevigata</i> (Smooth toadlet)	24	18	23 ± 16	16 ± 12
<i>Limnodynastes peronii</i> (Brown-striped frog)	10	7	14 ± 11	9 ± 7
<i>Nebatrachus sudelli</i> (Spotted burrowing frog)	1	1	0.7 ± 1	0.4 ± 0.7
No calls recorded	27	20	13 ± 11	11 ± 7

Species Diversity & Abundance

An abundance of frogs at a particular site can indicate the availability of good quality habitat that fulfills the requirements of a number of different species. On-going observations of frog species diversity at Frogwatch sites can highlight sites of significant environmental value, and can assist with decision-making, priority setting and management of an area.

Species Diversity	
Min. no. species per site	0
Max. no. species per site	6.0
Mean no. species per site	2.6
Median no. species per site	3.0

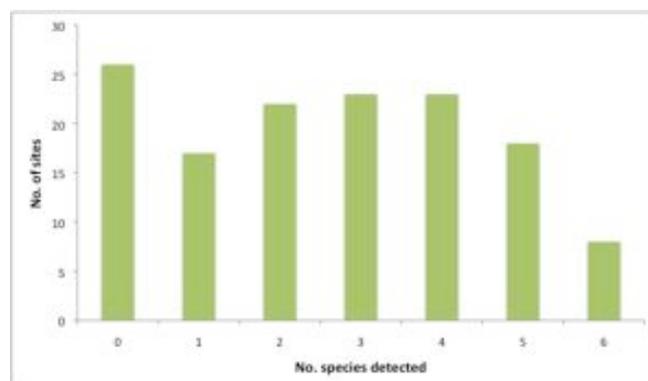


Figure 5. Relative abundance of species at sites surveyed during the 2008 Frogwatch Census.

The greatest number of species found at any one site during the 2008 Frogwatch Census was 6 species, one fewer than in 2007. Eight sites reported the presence of 6 frog species:

- Elmslea Estate Pond, Bungendore (BUN200);
- Hodgman Property, large dam (CFR200);
- Molonglo River, off Captains Flat Rd (CFR300);
- Ginninderra Creek, Macgregor (FGC090);
- Boardwalk Pond, Tidbinbilla Nature Reserve (FTD120);
- Gooromon Ponds Creek, Dunlop (GOO009);
- Molonglo River, at Molonglo River Park (MOL150); and
- Dam 1, "Macrorrhyncha", Moseley Property, Sutton (SUT100).

The majority of sites that reported the presence of 6 frog species are located in rural or peri-urban areas, or Canberra Nature Parks, which illustrates the significance of farm dams, ponds, rural environments and rivers as habitats for frog species.