

4. SUMMARY OF RESULTS

The 2006 Frogwatch Census was conducted in the midst of one of the ACT region's driest periods in recent history. The total rainfall for October 2006 was 4 mm - the driest for October since 1977 and second driest on record. Over the year, Canberra experienced its fifth lowest annual rainfall on record with a total of 360.6 mm. Many previously 'permanent' water bodies were either drying up or completely dry, and most major waterways were at extremely low levels.

These extremely dry conditions have had an impact on the number of breeding frogs detected during the October Census. For example, in 2006, no frogs were detected calling at one-third (33%) of Frogwatch sites, compared to only 8% of sites in 2005.

It should be kept in mind however, that at many sites where none or few frogs were detected calling, that they may still have been present at the site. As shown in the photograph at right, frogs will shelter in cracks, soil, or under leaf litter or rocks or logs to keep their skin moist, during dry periods. While they will obviously not be breeding (and therefore not calling) at sites with no water available, they may be just 'biding their time' until the next rains come.

Frog Species Detected

A total of 9 species were observed during the 2006 Frogwatch Census. They are listed here in order of greatest distribution.



Stromlo Forest Retention Dam SFF100 - Completely dried out, October 2006. Photo: R. McConville



Frogs (*C. signifera*) sheltering in cracked clay at the edge of a drying dam at Blackey's Hill BLA100.

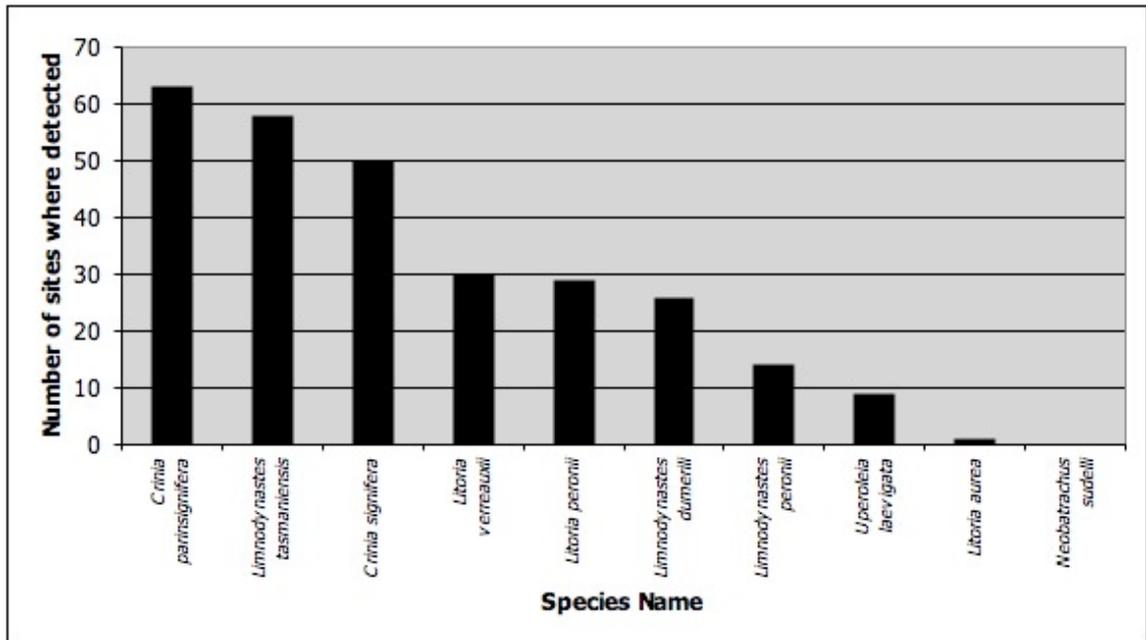
Photo: P. Cheeseman

Scientific Name	Common Name	Number of Sites (out of 146 monitored) Where Detected
<i>Crinia parinsignifera</i>	Plains Froglet	56
<i>Limnodynastes tasmaniensis</i>	Spotted Grass Frog	55
<i>Crinia signifera</i>	Common Eastern Froglet	51
<i>Litoria verreauxii</i>	Whistling Tree Frog	30
<i>Litoria peronii</i>	Peron's Tree Frog	28
<i>Limnodynastes dumerili</i>	Eastern Banjo Frog or Pobblebonk	27
<i>Limnodynastes peronii</i>	Brown-striped Frog	13
<i>Uperoleia laevisgata</i>	Smooth Toadlet	7
<i>Litoria aurea</i>	Green and Gold Bell Frog	1



As in previous years, the three most common species detected were *Crinia parinsignifera*, *Limnodynastes tasmaniensis*, and *Crinia signifera*. Each of these species was detected at at least 50% of Frogwatch sites, as shown in Figure 1.

Figure 1. Number of sites where each species was detected, October 2006.



This year, an important new record of *Litoria aurea* (Green and Golden Bell Frog) was detected. This is a significant find, as this species has not been recorded from any previous Frogwatch Census, and is considered a nationally threatened species. It was detected at one site.

For most species, the percentage of sites where they were detected was considerably lower than in previous years. As all species require standing water to breed, this is not an unexpected result. An exception to this is *Litoria verreauxii* (Whistling Tree Frog). *L. verreauxii* was found at a higher percentage of sites than in all previous Census years other than 2004.

A species not detected in the 2006 Census was *Neobatrachus sudelli*. This species was recorded in 2004 and 2005 at 3 and 2 sites respectively. This species is known to be an opportunistic breeder, staying burrowed in the ground for most of the year, and only becoming active during periods of extended wet weather when the ground is saturated. Its absence from the 2006 data is not surprising, considering the extremely dry conditions during October 2006.



An important new record of *Litoria aurea* (Green and Gold Bell Frog) was found in this year's Census.

Photo: www.en.wikipedia.org



Frog Species Diversity and Abundance

A high number of frog species inhabiting a particular breeding site can indicate the availability of good quality habitat that is sufficiently complex to fulfill the requirements of a number of different species. These sites are providing an important refuge and breeding site for a variety of frog species when other sites in the vicinity may have dried up, or may no longer have the fringing vegetation that frogs require for protection.

The greatest number of species found at any one site in October 2006 was 7 species. This number was found at two sites:

- Mulligans Flat Site 13 (MFL013)
- Parsons Property, Molonglo River Site 2 (PAR200)

Sites with six species detected included:

- Ginninderra Creek, at Macgregor, via Crago Place (FGC091)
- Little Whiskers Rd, River Site (LWR100)
- Mulligans Flat Site 17 (MFL017)
- Molonglo River, at Molonglo River Park (Waterwatch Site MOL200) (MOL150)
- Parsons Property, Molonglo River at house (PAR100)

In the previous year's Census in October 2005, there were fifteen sites with 6 species detected; one site with 7 species detected, and one site with 8 species detected.



Parsons Property, Molonglo River Site 2 (PAR200)
Seven different species were detected at this site.
Photo: H. Parsons



Little Whiskers Rd, River Site (LWR100)
Six different species were detected at this site. Photo:
F. Fitzgibbon

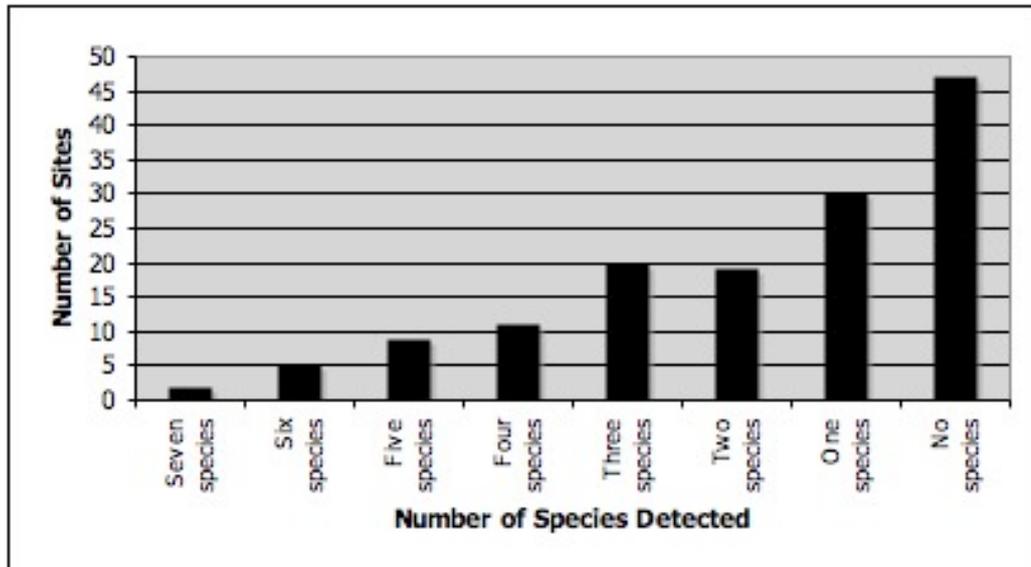
As shown in Figure 2, over half of the sites monitored had either zero or only one frog species calling. This is a significantly different scenario compared to results from 2005, which was a particularly wet year, and when the median level of species diversity was 3 species.



ARA100 - Aranda Paddock Dam
No frogs were detected calling at this site.
Photo: M. Koyama



Figure 2. Frequency of frog diversity at 2006 Frogwatch sites.



For almost all species, the most common abundance rating (i.e. the number of each species at a particular site) was '1 to 5'. The exception to this was for *Crinia parinsignifera*, which had an abundance rating of '5 to 20' individuals at slightly more sites than it was reported to have '1 to 5'.

Only two species were reported as having populations of '20 to 50' individuals. For *Crinia parinsignifera*, this was observed at eight sites, and for *Limnodynastes tasmaniensis*, this abundance was reported at one site.

