

Waite Conservation Reserve Biological Survey November 2008

Measured in participation alone the biological survey of last November was a grand success. Forty-four Friends and significant others turned out to crowbar pitfall traps into the hard rocky ground, brave steep slippery slopes to set, check and pick up Elliott and cage traps, and search and spotlight for hours in the heat and cold to uncover the reserve's biological wealth.

The 9-day intensive survey was designed to systematically sample each of the 14 vegetation communities identified by Grant Joseph in the reserve's re-vegetation manual. Fourteen quadrats were accordingly identified across the four major woodland associations of Red Gum, Blue Gum, Grey Box and Drooping Sheoak.

Techniques and effort

Our combined labours resulted in 2,800 trap/nights and 170 hours of targeted searches. Breaths were held on the first day of trap checking to see if of our novel pitfall trap setup would bear fruit. In the rocky soils, the usual deep pitfall buckets and fly-wire drift-fence were abandoned for the technique of sinking shallow buckets underneath pre-placed squares of corrugated iron.



Setting traps during survey

Peter Bird

We needn't have worried; the technique worked a treat, with 124 individuals of 7 species of lizards falling into our sneaky pitfalls.

Reptiles

In all we captured or opportunistically recorded about 350 individuals of 13 species of reptiles (Table 1). In the process we added a new species (Lined Worm-lizard *Aprasia striolata*) and confirmed the identity of another (Eastern Striped Skink *Ctenotus robustus*).

We also added hugely to our knowledge of the distribution and abundance of others. We established for instance that the Garden Skink prefers moist Red Gum Valleys whereas the Common Dwarf Skink thrives on hot north and west facing slopes.



Eastern Striped Skink confirmed for reserve

P. Bird

We found that Bougainville's Skink is not as rare as the paltry two previous records had indicated but is common and widespread – you just need pitfalls to catch them. We also confirmed Bluetongues and Sleepy Lizards really do occur in the reserve but you never see them, except in Elliott or cage traps.

Mammals

The same applied to the Echidna. Hundreds of hours of search time failed to record a single one, yet two were captured in cage traps. I still struggle to understand the attraction of Echidnas for peanut butter and rolled oats but perhaps they were following trails of ants leading to the bait!

Trapping otherwise drew a blank for mammals except for House Mice and Black Rats. The mice were typically caught in dense annual weedy grasses such as Wild Oats and the rats in Olives.

In time it would be nice to think numbers of both rodents will diminish as Olives and exotic grasses are replaced with native vegetation.

Arboreal mammals dominated the mammal scene. Ten spotlighting sessions resulted in sightings of 363 Ringtail and 38 Brushtail Possums and 45 Koalas, the latter including some daytime observations. Tree use statistics showed that ringtails preferred Grey Box; Brushtails preferred Grey Box and Red Gum; and Koalas preferred Red and Blue Gum relative to availability.



Common Ringtail Possum

Peter Bird

The record-breaking Jan-Feb heatwave was tough on those of us without air-conditioners but was catastrophic for the arboreal mammals of the reserve. Ringtail numbers fell from 9.7/ spotlight km to 3.8/ km while koalas fell from 1.5/ km to 0.15/ km. Virtually all possums and koalas disappeared from central parts of the reserve. Only those in peripheral areas of the reserve, perhaps those with access to water in suburbia, appeared to survive.

A worrying sign was the damage noted to Native Cherries (*Exocarpos cupressiformis*) by feral Fallow Deer. The Native Cherry is quite uncommon in the reserve yet saplings especially appear to be selectively targeted by deer for rubbing posts to remove the velvet from their hardening antlers. In the process they ring-bark the trees or simply bulldoze them flat. Examples of both can be seen along the track at Pultenaea Hill.

Birds

Three 20-minute counts on each of the 14 sites plus additional opportunistic sightings recorded 45 bird species. This included four species not on the current list: Common Bronzewing, Rufous Whistler, Cockatiel and Australian Ringneck, the later two likely aviary escapees.

The most frequently recorded species were Striated Pardalote, Rainbow Lorikeet, Adelaide Rosella and Red Wattlebird. Mean numbers of birds seen per count at each site ranged 9-40 of 4-11 species. Most birds and species were seen at Blue Gum sites followed by Red Gum, Grey Box and Sheoak.

Ten species were recorded breeding including three small declining? insectivores Buff-rumped Thornbill, Tree Martin and Striated Pardalote. Other observations of note include the sighting of 4 Peregrine Falcons, a general lack of small insectivores and honeyeaters except for the Pardalote and the Superb Fairy-wren (which ranked sixth in abundance); and several Boobooks and Tawny Frogmouths seen during spotlight searches,

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Peter Bird