

WARRON

Eastern Barred Bandicoot Newsletter

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SPECIAL POINTS OF INTEREST:

- Site updates
- Genetics
- Future Plans



INSIDE THIS ISSUE:

Blooming Mt 2
Rothwell

Caught on 3
Camera

Zoo News 4

Genetic Con- 4
cern

Decision is 5
Imminent

New Life for 5
Woodlands

Winter Picnic in the Parklands

Amy Winnard

Two and a half years after the release of 30 eastern barred bandicoots into the Hamilton Parklands, the reserve and its inhabitants are continuing to thrive. Quarterly monitoring has revealed that the bandicoot population is chugging along, with more than 30 bandicoots known to be alive at any one time.

The actual population size will be larger than this as there will always be those elusive bandicoots that refuse to enter a trap, no matter how enticing the peanut butter and honey treat contained within is.

Monitoring has also revealed that the population increases in winter and spring, with at least 50 bandicoots known to be alive in those seasons. This interesting pattern is most likely due to increased breeding during the cooler months, combined with more easily accessible, juicy, energy rich morsels, such as worms and beetle larvae.

These food items are more abundant and closer to the soil surface in the cooler months. The slight population decline in summer, back to 30 bandicoots known to be alive, is again most likely due to food availability, or rather a lack of food to feed so many hungry mouths.



Juvenile bandicoot digging for food

Without regular fence maintenance and fox monitoring within the Parklands I would probably be reporting a different outcome, one of population devastation! It isn't because of luck that we avoided that outcome; instead, it is due to the commitment of DSE staff who continue to keep the Hamilton

bandicoots safe with their hard work.

After monitoring this population since winter 2007 for my PhD, the time has now come to hang up my bandicoot handling bag and pass the reins onto

Richard Hill. I will miss

my furry little friends that I have come to know so well, but I am sure I will return for many visits long into the future. For now my attention must focus on writing my thesis, which would not have been possible without the help and time from every member of the eastern barred bandicoot recovery team.

In August 2009, two weeks after the winter monitoring, our worst nightmare occurred; a fox somehow gained access to the reserve! No one knows how this happened, but the fox was quickly detected and poisoned, and there was no noticeable population decline at the next monitoring session in November 2009.

Blooming Mt Rothwell

Paul Mervin



Mt Rothwell in May 2009. Very little grass was present as a result of overgrazing

Staff, visitors and volunteers have all been thrilled to see the rejuvenation of the grasses and other woodland flora...

Another huge year has been had for Mt Rothwell with significant gains across the reserve. Eastern Barred Bandicoot numbers are still strong throughout the woodland and still a common sight across the granitic hills and throughout the grasslands beyond.

We have had 2 releases of captive bred stock in 2009, coming from both Melbourne Zoo and Monarto Zoo. All releases were into the basalt grasslands area to the north east, hoping to build numbers throughout this zone and in total 22 new EBB's were released there in 2009. Although trapping events have again only yielded a few re-captures, visual sightings in the area are higher and the population appears to be doing well.

Most importantly Mt Rothwell has, over the course of winter 2009, managed to achieve the goals set for reducing grazing pressure in the old growth woodland before the spring growth period. With the combined efforts of volunteers from Mt Rothwell, Werribee Zoo, Serendip Sanctuary, Parks Victoria, Halls Gap Zoo, The Marsupial Society of Victoria and private collectors from all over the state we successfully re-homed in excess of 100 Pademelons and the grass growth

achieved in Spring has been the best seen for years.

Similar operations will continue over 2010 to re-home Red Necked (Bennett's) Wallabies and the remaining Pademelons from the woodland. Southern Brown Bandicoot numbers seem stable or even lower than previous years and do not appear to be impacting on the spread of EBB's. The Pademelon removals over 2009 have been without doubt the definitive step that was needed in the recovery of the woodland. Staff, visitors and volunteers have all been thrilled to see the rejuvenation of the grasses and other woodland flora species and despite initial concerns, a relatively low emergence of weed species.

The EBB sightings in the woodland remain high on any given night and with a much improved ground cover they are often seen at close range and for longer durations. They are no longer fleeing at top speed to find cover and offering an

even more rewarding observation experience for those lucky enough to be here to see them.

Throughout 2010 Mt Rothwell will continue to grow and further improve infrastructure with the building of visitor toilets, an enclosed BBQ area and some machinery sheds. Another exciting development in the planning stages is a new animal house/nocturnal display that will not only improve housing for captive eastern quolls but also offer day time visitors to Mt Rothwell an exciting and rewarding viewing experience of EBB's and some of our other wildlife.

All staff and volunteers at Mt Rothwell look forward to the continued success and development of this important site and will be working on through 2010 for the EBB and all of our endangered wildlife.



Mt Rothwell today showing the luscious grass growth as a result of grazing pressure removal

Caught on Camera

Val Lang and David Coutts



The Mooramong homestead

Reintroductions of Eastern Barred Bandicoots commenced in late 1992 into the Conservation Area at the National Trust's property at Mooramong near Skipton. This was the first release site of Eastern Barred Bandicoots into the 'wild', into an area not enclosed by a predator proof fence.

The population has been maintained there for almost 20 years. During the recent dry years trapping and observations have indicated that the population has retreated from the broad area of the nature reserve to become concentrated around the Mooramong homestead and adjacent park-

lands. Over this time the population also declined. It was feared that the population had ceased to exist with the last trapped adult male relocated to the EBB breeding population at the zoo.

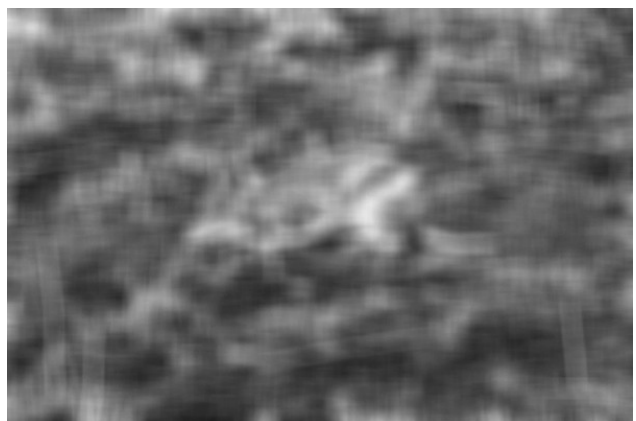
However fox control has been maintained. Shooters have been spotlighting every two to three weeks since Christmas. This is considered particularly effective time for shooting as the surrounding farmers' crops have been harvested. They have recently been recording low to zero sightings. Regular baiting has continued with the next fox-off program about to commence.

In January and February Ray and Cherie Draper, accompanied by young daughter Maia, set up infrared cameras in the parkland surrounding the homestead. They used four infrared cameras for one night, at two week intervals, on three separate occasions and were rewarded with two EBB

photographs. These may be recordings of one or two, obviously trap-shy, bandicoots. The Mooramong Reserve Committee is understandably delighted with the results to date and would like to thank Ray, Cherie and Maia for volunteering their time and use of their equipment.

The block of four enclosures, each enclosure 100m x200m, from the initial release of the EBBs, has been restored. The netting has been secured and an area around the pens cleared. A volunteer group, CVA, will build an additional outer fence skirting the original enclosure. The enclosures will be used to house post-breeding stock from the EBB breeding program at the Melbourne Zoo. Twelve post-breeding animals, two females and one male per enclosure, will be released into this area at Mooramong in early autumn 2010. The pens have been made bandicoot friendly with extra hollows for shelter and mulch for snuffling for food.

***They used
four infrared
cameras...
and were
rewarded
with two
EBB
photographs.***



Not that easy to see, but you can just about make out a stripy bum and a tail in the picture on the right and a whole EBB in the centre of the picture on the left

Zoo News

Peter Courtney



The bandicoot enclosure at Werribee Open Range Zoo

...there are plans afoot to house [bandicoots] in large pens at several different sites that are coming on board with the Recovery Program.

The three Zoological Institutions breeding the Eastern Barred Bandicoots have had a good year during 2009 with 46 youngsters having been produced since February 2008. The good numbers have been achieved as we have had sufficient space for housing since we were able to release a large number of bandicoots last year. In spring 2009, 21 animals were released into Mt Rothwell, the rainfall had been good in spring

and the conditions were good for the release. We have also in the last year had an increase in holding space within the Zoo system with Melbourne constructing 9 more enclosures to hold excess stock.

The plan for this coming year is to have another release at Mt Rothwell in autumn; this may be the final release possible at this site as the carrying capacity of the location will soon be reached. There is

now a need to find other areas to release bandicoots in to. Currently there are plans afoot to house small numbers in large pens at several different sites that are coming on board with the Recovery Program. There are also plans to expand the facilities at Werribee Open Range Zoo which in the future may become the major holding and breeding facility for the Eastern Barred Bandicoot.

Genetic Concern

Andrew Weeks

CESAR at the University of Melbourne has completed their work on assessing genetic variation within Victorian eastern barred bandicoots. Genetic variation, determined using neutral microsatellite genetic markers, was assessed in individuals from Hamilton, Mount Rothwell, the current Zoo Breeding Program and also historical samples collected from individuals that were in the Zoo Breeding Program from 1994 to 1998. These Victorian samples have also been compared to samples from populations in Tasmania, where EBBs are still found in large numbers in natural populations.

Genetic variation can be used as a way of determining the health of a population – populations that display high genetic variation (measured as heterozygosity and number of alleles at a locus) are typically healthier than populations that display low levels of genetic variation. Declines in genetic variation, when compared through time, indicate reductions in the effective population size (those individuals that contribute genetic material to subsequent generations) and possibly inbreeding. These declines may indicate low fitness and ultimately lead to the extinction of populations.

Whilst similar levels of genetic variation were found in individuals from the current Zoo Breeding Program and from the Hamilton and Mount Rothwell populations, the Victorian EBBs had significantly lower levels of genetic variation than Tasmanian EBBs. Worryingly, we have found that genetic variation has decreased through time in the Zoo Breeding Program, with higher genetic variation found in historical samples from the Zoo Breeding Program (1994-1998) than what is currently found within the Breeding Program (2009). This is concerning for the medium to long-term survival of Victorian EBBs.

Decision is Imminent

Richard Hill



French island information session held in 2009

Over the past two years the Eastern Barred Bandicoot recovery team has been working with members of the French Island community discussing the idea of introducing Eastern Barred Bandicoots to French Island. Some islanders have raised concerns about the po-

tential impact of a release on the islands biota and there has been considerable discussion of how (if at all) to try and evaluate those risks. We are now suggesting that a way forward might be to do a trial release of non-breeding animals. The trial would aim to answer the following:

- whether French Island is a suitable potential release area for the Bandicoot;
- whether the Bandicoots will make significant use of the private cleared land and native vegetation on French Island; and

- whether the Bandicoots will compete for food and habitat with the native Long-nosed Potoroo.

These are some of the key questions concerning the potential risks posed by an introduction. The recovery team has produced and circulated an information sheet to all French Island residents and a vote is proposed to be held sometime in April. If the community votes to support the trial, the recovery team will seek an honours student to start in winter 2010, with a release of radio-tagged, non-breeding animals happening in spring 2010.

...a vote is proposed to be held sometime in April.

New Life for Woodlands

Richard Hill

Eastern Barred Bandicoots have been extinct at Woodlands for at least two years, however the Eastern Barred Bandicoot recovery team is working hard with Parks Victoria and Conservation Volunteers Australia to try and reintroduce bandicoots there. If Woodlands can be made fox-free, then it will become the most important site for the recovery team and a reintroduction. This is because it was so successful, supporting hundreds of bandicoots for a couple of years in the mid-1990s. The cause of their decline after this period is reasonably well understood, with the main culprits thought to be fox pre-

dation and overgrazing by kangaroos and rabbits. Since the Woodlands fence was built, predator fencing has improved substantially in its design and effectiveness. The Woodlands fence needs a 'floppy top' to be added to the top of the fence. This is the fence design which has been so successful in excluding foxes from the Hamilton Parklands. None of this work is cheap however, and we are seeking in the order of \$100,000 to do the initial fence improvements and to make the reserve fox-free. Patrick O'Callaghan from Conservation Enterprises is working with Conservation Volunteers Australia and Parks Vic-

toria to develop a proposal for private support of the Eastern Barred Bandicoot at Woodlands under the banner of the CVA Wild Futures program. Eastern Barred Bandicoots at Woodlands may be a good candidate for corporate interest because Woodlands is close to the city.



The Hamilton fence showing the 'floppy top'



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The Eastern Barred Bandicoot Recovery Team was founded in 1989 after a continual decline was noted in the wild population. Bandicoots have since been reintroduced into eight sites but are now only known to be present at Hamilton Community Parklands, Mooramong and Mount Rothwell. Eastern Barred Bandicoots are considered critically endangered in Victoria and the population is estimated to be around 200 animals.

'Warron' is the Kirrae Whurrong word for the Eastern Barred Bandicoot. This newsletter was named 'Warron' in honour of Wayne Drew after his passing in 2001. Wayne was the 'Bandicoot Ranger' for Woodlands Historic Park and a member of the Kirrae Whurrong people from the western district of Victoria.

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