



EBB Conservation Expands to Islands

Churchill Island, off Phillip Island, is destined to be a new home for EBBs. The release will be a trial to evaluate the suitability of local conditions for EBBs on fox-free islands, which lie beyond their known historic range, and demonstrate to the community what they might expect from an EBB release on large fox-free islands. Looking to the future, the long-term survival of EBBs may depend on establishing self-sustaining populations on large fox-free islands. Such islands don't require predator proof fencing, nor conducting daily fence checks and maintenance to ensure fence integrity, which are all costly and we've seen fail in the past.



Churchill Island

Although Churchill Island is considered too small (at 57 hectares) to support a self-sustaining population of EBBs, this trial is a key step towards achieving that goal. The majority of Churchill Island supports suitable woodland and grassland for EBB nesting and foraging and the island is free of introduced predators and competitors as a result of intensive pest control work by Phillip Island Nature Parks to eradicate foxes (2007), cats (1998) and rabbits (1999). Churchill and Phillip Islands are connected by a 100m concrete bridge which sports a rabbit and predator resistant gate at the bridge to safeguard the island at night.

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The trial will be run by Phillip Island Nature Parks and is supported by Zoos Victoria and the Eastern Barred Bandicoot Recovery Team. It will start with a release of 16 individuals in August 2015 and is expected to last ten years. After the first two years, we will have a better understanding of EBB impact in novel environments and be able to make a more informed decision regarding the suitability of EBBs for a full release to larger fox-free islands, such as Phillip Island and French Island. The remaining eight years of the trial will be used to refine EBB management techniques at all release sites.

This is an exciting step towards large, self-sustaining populations on islands where this species can be secure and flourish. • *Duncan Sutherland*

Woodlands, Keep on Rising



The Woodlands fence at sunrise (Photo: T. Scicchitano)

It's been another busy and productive year at Woodlands.

Starting off with some positive news on the fox front. The old rickety fence has done its job. We have been fox free for the past 12 months. The fence might not look as pretty as some of the newer models around, but she is doing her job! The addition of the floppy top is working well and with plenty of fence patrols we are moving ahead. So well done to Parks Victoria and all the volunteers who assist me with regular fence checks.

Without any predator action we have had a change in our possum behaviour. They seem to be spending more time playing on the ground. One night of spotlighting saw 71 being counted on the ground, not just in the woodland but well into the grasslands. Because of this we are getting a very high rate of possum trap interference. In March, 86% of traps were closed on arrival due to possum interference. Not to mention how many possums were caught and how much possum poo had to be removed! The glorious side of trapping. To reduce the problem we have been trialling modified traps. Smaller insert doors have been used to deter the possums with some success. A few more tweaks and I think we'll have a successful design.

Now to the very exciting news. Even with the high trap interference the EBB numbers are steadily growing. In March, 86 individuals were caught over the 4 day monitoring period, which was fantastic. But July trapping was to break all the records. On day 1 of trapping 79 individuals were caught including 27 'cleanskins' (never caught before). The previous daily record was 31 individuals and 12 'cleanskins'. It was a long day for the 6 handlers and all the volunteers but it was amazing to see those numbers. All up, over the four days of trapping we caught 114 individuals and 63 pouch young. So bring on October and let's see if we can have another record breaking trap session.

Once again a huge thank you to all involved in the EBB Recovery Team. A great reward for everyone's persistence. • Travis Scicchitano

Did you know:

**You can get involved
with EBB recovery at
Woodlands Historic
Park by volunteering
with Conservation
Volunteers?**

**Check out the
[Conservation
Volunteers website](#)
for more details.**

New Life for Hamilton



Fixing the fence (Photo: K. Volk)



EBB family day at Hamilton (Photo: K. Volk)

Hamilton Community Parklands has been in limbo for the last 12 months, although regular reports of EBBs, and our monitoring indicate that small numbers still remain inside and outside the fence. As well as reductions in funding, things were also complicated by the retirement of Barry 'Buzz' Carr from the Department of Environment, Land, Water and Planning. Buzz and Gavin Lewis have been the backbone of the Hamilton reintroduction for years, and with Buzz's retirement, I was left without departmental staff who could manage Hamilton. In stepped Conservation Volunteers Australia, who have been assisting at the Parklands for several years doing weed management, as well as helping with EBB monitoring. CVA have worked with Parks Victoria to manage a successful reintroduction of EBBs into Woodlands Historic Park. Fresh from this success, CVA expressed an interest in taking over the management of Hamilton Parklands, re-establish it as fox-free, and reintroduce EBBs. Our plan is that over the next couple of months, CVA will take over the day-to-day management of the fence, predator control, and work to remove all foxes and cats. Come 2016, once the site is fox and cat free, we will supplement the small remaining population with new animals, and re-establish a significant population.

At the same time the EBB recovery team are planning for several reintroductions and island introductions. If these all go ahead they will require large numbers of source animals. Our plan is to manage Hamilton to maximise the number of these source animals.

A very big thankyou to 'Buzz' Carr and Gavin Lewis for all their good work over the past decade looking after Hamilton. • Richard Hill



Bursting with Bandicoots

Estimating the EBB population at Mt Rothwell has always been challenging. Trapping attracts a large number of other small mammals such as bettongs, brush tail possums, quolls and southern brown bandicoots, resulting in incredibly low EBB captures. This method of population monitoring was abandoned early due to high effort for little reward. Camera trapping has also been trialled but as individual EBBs cannot be identified on photos, population estimates are not possible.

In April, Zoos Victoria and the EBB Recovery Team trialled a new method – distance sampling. This survey technique has rarely been used on small nocturnal mammals but basically involves spotlighting EBBs along transects. A total of 22 transects were set up across Mt Rothwell, totalling almost 22 km. It took 4 nights to walk all transects and resulted in 202 EBBs spotlighted, including 4 pairs caught in the act! The distance and bearing of each EBB to the transect was recorded to allow population estimate through statistical analysis of the data.

The Mt Rothwell EBB population was being guesstimated at around 400 EBBs, but the distance sampling data estimated the population at 1154 EBBs! That's tripled the number of mainland EBBs we thought we had, and the EBB Recovery Team has now exceeded its 5 year population target of 1,000 EBBs, one year early.



A lonely stag in the Zone 3 grasslands (Photo: G. Lee)



One of the EBBs spotlighted during the distance sampling surveys (Photo: Y. Pauligk)

Mt Rothwell certainly is an EBB haven, which is playing a pivotal role in recovering the EBB from near extinction. • Yvette Pauligk

Did you know:

**You can book a
spotlight tour at Mt
Rothwell to see
Victoria's largest EBB
population?**

**Contact
info@mtrothwell.com.au
to find out more.**

Head down to Melbourne or Werribee Zoo and pick up your EBB memorabilia



(also available in the online [zoo shop](#))



Eastern Barred Bandicoot
adoptions are available through
Zoos Victoria and make a
wonderful gift

*...and don't forget to order your EBB
Recovery t-shirt from Conservation
Volunteers. Call the Melbourne Office
on 03 9326 8250 or email:
melbourne@conservationvolunteers.au*



How to Collar a 'Coot

In many ways EBBs are a delightful species to work with – they don't bite, are very placid and easy to catch (usually). But there's one problem with EBBs. They are quite precious and don't tolerate anything being stuck to them. Why should this matter? I hear you ask. Well, in order to really understand how EBBs use and interact with their habitat, we need to radio track them. This involves attaching a radio-transmitter to them so we can locate their foraging and nesting sites. Various methods of attachment have been trialled over the last two decades: gluing to fur, mounting to their tails, collars and even internal transmitters. Most techniques have been unsuccessful, usually due to very short retention times.

Many people have commented that it is impossible to collar a bandicoot due to its triangular shaped head and lack of obvious neck. But recently, I trialled a new collar design on captive EBBs held at Melbourne Zoo. These trials have shown that collars can be attached for at least 14 weeks without causing injury or any noticeable behavioural response. The secret? Use a very light weight transmitter and attach with a skinny (2.4mm wide) cable tie.

At the very mention of cable-ties I usually see a look of fear in people's eyes, but rest assured, these do not self-tighten and EBBs can force them off should a leg get stuck. The golden rule for figuring out transmitter weight is usually 5% of body weight. Based on this, EBBs should be able to carry a transmitter weighing 40 g, these collars weigh around 3 g, that's less than 1% of body weight!

After the success of the captive collar trials, field trials are now needed to further test the suitability of these collars. EBBs released onto Churchill Island in August will all have their very own collar and will be monitored morning and night to determine home range size, habitat selection and movements across their new island home.

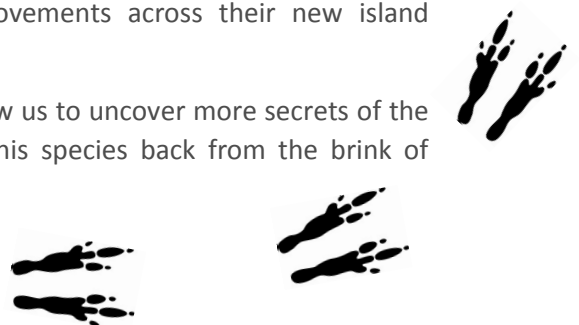
If successful, this collar will allow us to uncover more secrets of the EBB and assist with bringing this species back from the brink of extinction. • Amy Coetsee



A female EBB wearing her new collar
(Photo: A. Coetsee)

Did you know:

We have been trying for over 20 years to find a suitable radio-tagging technique that EBBs will tolerate for at least 3 months?



EBB Guardians

For thousands of years Guardian Dogs have been used to protect livestock from predation. They are also used on Middle Island, near Warrnambool, to protect little penguins from foxes.

Zoos Victoria and a number of partners are embarking on an ambitious plan to use guardian dogs to help return EBBs to the wild on mainland Australia. If successful, EBBs could potentially be returned to many places in Victoria, using Maremmas instead of costly predator-barrier fences to protect them from fox and cat predation.

Up to seven Maremmas will undergo at least two years of training at Werribee Open Range Zoo to allow them to mature and build strong bonds with EBBs. As EBBs are small, nocturnal and shy, dogs will also be bonded with sheep, which will provide them a focus during daylight hours when EBBs are sleeping. The bonding process is very gradual, with scent-based, territory-based and visual introductions followed by supervised interactions.

Once dogs are fully trained and view both EBBs and sheep as normal residents within their territory, they will be deployed with a small flock of sheep at one of three trial sites. The first being Tiverton Station, in Western Victoria. One pair of dogs will patrol the 50 hectare trial site surrounded by a stock fence, to prevent sheep and EBBs from dispersing. Introduced predators in the area will be closely monitored to determine how they

change their behaviour in response to the dogs. Only when we are confident that dogs are having a negative impact on cats and foxes will EBBs be released into trial sites.

The first two working puppies recently arrived at Werribee Open Range Zoo and commenced their bandicoot bodyguard training. They are being held in a special off display facility, but if you're visiting Werribee Open Range Zoo, keep an eye out for Albus our Ambassador Guardian Dog, he'd be happy to say hello.

• Dave Williams



Dave Williams with the new puppies (Photo: W. Watt)



Albus, Zoos Victoria's ambassador guardian dog (Photo: Zoos Victoria)



Captive Capers

It has been another exciting year for the EBB Captive Breeding Program! There are currently 59 animals in the captive program, including 10 new breeding animals that recently joined us from Mt Rothwell Biodiversity Interpretation Centre. These EBBs will be finishing their quarantine period and joining the breeding program at Werribee Open Range Zoo (WORZ) soon. Transitioning animals into the captive program from free ranging populations is a delicate process, so the WORZ keepers and vet staff are keeping a close eye on the new arrivals and ensuring they have plenty of tasty insects to keep their weights increasing.

Last year we commenced mate choice trials with our University of Melbourne/Zoos Victoria Master's student, Chris. In a number of taxa, allowing a female to choose her mate from a

suite of genetically suitable animals may improve breeding success and survival of young. We are determining if this natural reproductive behavior occurs in EBBs and if it's feasible to use mate choice techniques, such as gauging a female's interest in a male or his scent, in the captive program. In 2014, we had 9 litters produced from 12 pairs of EBBs, with many of these offspring now preparing to breed themselves. We are currently in the midst of mate choice trials again, with the first few females already paired to breed and the remaining animals to be paired in the coming months. Following their trials, the majority of pairs will remain at WORZ, with breeding pairs also being cared for at Serendip Sanctuary, Healesville Sanctuary and Kyabram Fauna Park.



Dyson, one of the hand raised EBBs at Melbourne Zoo
(Photo: K. Williams)

Did you know:

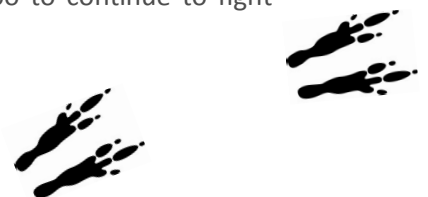
**EBBs are on display
at Werribee Open
Range Zoo?**

**Head into Baz's
Bandicoot Hideout
and see if
you can
spot one
today.**



A number of our captive bandicoots have also been involved in the collar trials taking place at Melbourne Zoo. Research is an important component of the captive program. In August, a selection of captive animals will gather at Melbourne Zoo for fitting of their radio-tracking collars and a pre-release diet regime to prepare them for release to Churchill Island. It will be exciting to see these EBBs released to a new location and track their progress! We also have a number of animals ready to travel to new homes at Mooramong and Woodlands Historic Park this winter.

Finally, we say goodbye to our old EBB enclosures at Melbourne Zoo... so we can say hello to a brand new Melbourne Zoo EBB precinct! With the planning stage nearly completed, we will be starting construction of banks of over 20 new enclosures at Melbourne Zoo to continue to fight extinction for the EBB. • Marissa Parrott



Raptors, Dingoes and Dogs...

Oh My! Its Rabbit Season

While EBB's are booming at Mt Rothwell so are the rabbits. Rabbits have done significant damage to parts of the landscape by overgrazing and landscape destruction. While this has provided great entertainment with the incredible raptor shows as they prey on rabbits, the rabbit damage has been the driving force behind our ambitious Rabbit Removal Plan. This is a three year plan that aims to remove all rabbits from the property. To do this we have trained two dogs in rabbit detection and capture and have a third currently in training to join the canine conservation team. So far we have removed over 7,000 rabbits from across the property since October 2014 and eradicated rabbits from approximately 23 ha. The regrowth of grasses in rabbit free areas is astounding.



One of the 1,100 EBBs that call Mt Rothwell home
(Photo: G. Lee)



Chilli the dingo pup, set to join the canine conservation team (Photo: A. Coetsee)

Dingoes are also set to join our canine conservation team with two puppies about to start training. The plan is to determine the trainability of Dingoes. We hope to train them to a level where they will indicate for rabbits and not natives.

Over 1,100 EBB's now call Mt Rothwell home, this is around 80% of the mainland EBB population. Having such a large population has allowed us to supply 12 EBB's to Zoos Victoria's captive breeding program and 10 EBB's for the Churchill Island release in August.

Fence planning at our sister site, Tiverton, is also well underway. Construction is scheduled to commence in spring 2015 with an ambitious completion date of autumn 2016. EBB's are likely to be released in 2017 after a very thorough pest control program, which will remove all introduced pests, including rabbits, from within the boundary. At around 1,000 ha, Tiverton will be the largest fenced reserve in Victoria, capable of holding at least 1,000 EBB's.

• Annette Rypalski





The Eastern Barred Bandicoot Recovery Team was founded in 1989 after a continual decline was noted in the wild population. Although extinct in the wild on mainland Australia, reintroduced populations of bandicoots can be found in predator-free areas at Hamilton Community Parklands, Mt Rothwell Biodiversity Interpretation Centre and Woodlands Historic Park, occupying a total of 800 ha.

'Warren' is the Kirrae Whurrong word for the Eastern Barred Bandicoot. This newsletter was named 'Warren' 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.



Further information:

Act Wild

www.actwild.org.au/animals/bandicoot/

Conservation Volunteers

www.conservationvolunteers.com.au

Mt Rothwell

www.mtrothwell.com.au

Phillip Island Nature Parks

www.penguins.org.au

Zoos Victoria

<http://www.zoo.org.au/>

If you would like to receive this newsletter by email send your address to ACoetsee@zoo.org.au



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