

HFNC Bear State Forest fauna nest box report 21 Nov. 2015

Rod Bird & Reto Zollinger

Participants: Rod Bird & Diane Luhrs, Reto Zollinger & Yvonne Ingeme, John & Glenys Cayley, Lyn & Dave Munro, Hilary Turner, Roger Thompson. Members from Hamilton left the Visitor Centre at 9 am and met Hilary at East-West Rd/Hallams Rd before entering the Bear SF.

Background

On 20-21 April 2012 ten nest boxes were installed at Sites 2, 3, 5, 6 & 10 (pairs of a large and a small box) in the Bear SF. Boxes were moved from Sites 6 & 10 to Sites 14 & 15 in April 2014.

John Burtonclay from Mandurang constructed the boxes (www.nestboxenironest.com)

The fauna nest boxes were of 2 types, both with a 40 mm entry hole specific for our target species:

- Tuan/Glider box – 370 mm x 197 mm x 235 mm internal spaces (H x W x D), with top-hinged lid.
- Bush box – 271 mm x 195 mm x 157 mm internal spaces (H x W x D), with side opening.

The aim was to survey small mammals, hopefully including Brush-tailed Phascogale, Sugar Glider, Pygmy Possum and *Antechinus* spp. The idea of putting 2 boxes near one another was to allow Brush-tailed Phascogales the chance to use a box in areas where Sugar Gliders were present (gliders may not allow another glider family to live close by but might allow phascogale to do so). There was a problem with bees in some large nest boxes. Action taken was to fit wool carpet on the upper walls and/or under the lid of the large boxes. Two boxes also had a movable flap fitted over the inside of the hole.

Site 2 – 1.2 km from Bear SF sign on Hallams Tk.

Habitat – dense *E. baxteri* forest with *X. minor* understorey (unburned >60 years).

- Nov. 2012 – bees in the large box were sprayed with insecticide. No bees in the small box.
- 7 May 2013 – dead bees & honeycomb was removed from the large box and carpet was stapled under the lid and the upper 150 mm section of walls.
- 19 Nov. 2013 – there were leaves and several Sugar Gliders in the large box but not in the small box. No bees found in either box.
- Apr. 2014 – no animals were seen in either box. Green leaves were among old leaves in the large box. No bees in either box.
- 25 Nov. 2014 – no leaves in the small box; fresh leaves with old leaves in the large box. No bees in either box.

Site 3 – 2.7 km from Bear SF sign on Hallams Tk.

Habitat – a valley with *E. leucoxydon*, *E. melliodora*, *E. viminalis*, *E. baxteri*, *B. marginata*.

- Nov. 2012 – there were no bees in either box.
- 7 May 2013 – there were no bees in either box. Carpet was stapled under the lid of the large box.
- 19 Nov. 2013 – the large box contained leaves and Sugar Gliders. Many leaves were in the small box. No bees found in either box.
- Apr. 2014 – no animals were found in either box but green leaves were among the old leaves in the large box. Only dry leaves were in the small box. No bees in either box.
- 25 Nov. 2014 – old leaves in the small box; fresh leaves & old in the large box. No bees in either box.

Site 5 – west of fire dam on track to McAdams Rd, in a drainage flat.

Habitat – *E. melliodora*, *E. baxteri*, *B. marginata*, *A. mearnsii* and *X. Minor* and many logs.

- Nov. 2012 – bees in the large box were sprayed with insecticide. The small box was empty.
- 7 May 2013 – dead bees & honeycomb was removed from the large box. Carpet was stapled under the lid and a 50 mm circular, black-painted sheep ear tag was loosely attached inside the box on a screw, over the 40 mm entry hole, to deter bees from entering.
- 19 Nov. 2013 – green-coloured but dry gum leaves filled a depth of about 6 cm in the large box but there were no animals present. The small box was empty. No bees in either box.
- Apr. 2014 – green leaves were found among the dry leaves in the large box but no animals were seen. There were no leaves in the small box. No bees in either box.
- 25 Nov. 2014 – no leaves or animals in small box or old box. No bees in either box.

Site 6 – 0.9 km on 2011 Burn Tk from jn 2011 Burn Tk/McAdams Tk.

Habitat – *E. leucoxyton* & *E. baxteri* and *X. minor* in an area partially burned in 2011.

- Nov. 2012 – bees in the large box were sprayed with insecticide. No bees in the small box.
- 7 May 2013 – dead bees & honeycomb was removed from the large box and carpet was stapled under the lid and a flap was fitted over the hole (as for Site 5).
- 19 Nov. 2013 – both boxes were devoid of leaves or animals. No bees in either box.
- Apr. 2014 – no leaves or animals were found in either box. No bees in either box. Both boxes were removed from the area and shifted to Site 14.

Site 10 – 0.7 km N on Hallams Tk from McAdams Tk jn, then 250 m west.

Habitat – *E. leucoxyton*, *E. melliodora*, *E. viminalis* & *B. marginata* open woodland with *X. minor*.

- Nov. 2012 – no bees in either box.
- 7 May 2013 – there were no bees in either box. Carpet was stapled under the lid of the large box.
- 19 Nov. 2013 – both boxes were empty of leaves or animals. No bees in either box.
- Apr. 2014 – both boxes were empty of leaves or animals. No bees in either box. Both boxes were removed and shifted to Site 15.

Site 14 – 1.3 km N on Hallams Tk from McAdams Tk jn.

Habitat – *E. leucoxyton* & *E. melliodora* open woodland

- Apr. 2014 – large & small nest boxes from Site 6 were installed here.
- 25 Nov. 2014 – both boxes were empty of leaves or animals. No bees in either box.

Site 15 – 1.9 km on Hallams Tk from McAdams Tk jn.

Habitat – *E. leucoxyton* open woodland adjacent to *E. baxteri* forest & *E. camaldulensis* creek line

- Apr. 2014 – large & small nest boxes from Site 10 were installed here.
- 25 Nov. 2014 – both boxes were empty of leaves or animals. No bees in either box.

Results of inspection of nest boxes in Nov 2015

In 2015 we acquired a pole camera unit to enable us to view (and photograph) the inside of the boxes from the ground, obviating the use of a ladder. This visit was the first test of the system.

Site 2: There were green leaves and 2 or more Sugar Gliders in the large box. The small box had some green leaves ~50 mm depth but no animals. No bees in either box.

Site 3: There were green leaves and 2 or more Sugar Gliders in the large box. The small box had some dead leaves ~50 mm depth but no animals. No bees in either box.

Site 5: There were green leaves and 2 or more Sugar Gliders in the large box. The small box had some dead leaves ~10 mm depth but no animals. No bees in either box.

Site 14: There were no mammals, bees or leaves present in the large or small boxes.

Site 16: There were no mammals, bees or leaves present in the large or small boxes. There were some chew marks around the entrance hole of the large box, probably from Cockatoos.

Conclusions to date:

1. The action taken to exclude bees from the large boxes has worked. Sugar Gliders successfully negotiated the flap in the large box at Site 5. The flap alone may be enough to exclude bees.
2. Bees have not set up in the small boxes, all of which were left untreated.
3. Sugar Gliders were the only mammals to use the boxes and they preferred the large boxes, taking green leaves inside for bedding.
4. Some leaves were found in 3 small boxes, proving that Sugar Gliders will attempt to nest next close to another nest site (perhaps juveniles from the same family?) but no animals were present.
5. Boxes at the 2 sites in Yellow Gum woodland were unused. It was hoped that Brush-tailed Phascogales might be present there.
6. The small boxes are not recommended for small mammals.
7. The light supplied by the pole camera used to inspect the interior of the boxes was not adequate; that was overcome by using another telescopic pole to lift the lid of the large boxes.

Photos below show the use of the pole camera device to inspect the interior of the large nest boxes.

In the second picture a telescopic pole (silver-grey) was used to lift the lid of the box, enabling the camera on the other pole (the one with the yellow base) to take a photo from the top in good light. The lid is then lowered/pulled down using the bracket on the top of the lifting pole.



Site 2. Photo from pole camera.



Site 3. Photo from pole camera.



Site 3. A large Sugar Glider asleep in a box.

Part of another animal may be glimpsed to one side.

The photo shown here was taken with a digital camera, after using a ladder to reach the box and open the top.



Site 5. Photo from pole camera.