

Organ Pipes bat box check 14 October

We had a beautiful spring day and an entirely new team of bat enthusiasts, three from Biosis. Samantha Vertucci was visiting from the Canberra office



Katie Stevenson works in the Port Melbourne shop



And so does Thea Shell.



And finally we had Kate Senior, a 3rd year biology student at Deakin Uni. Fortunately, three of the four have been vaccinated and were brave enough to climb ladders, so after a bit of

tutorial about extracting bats from boxes we operated two ladders. But there were so many bats it still took until almost 7 o'clock to empty the last box.



There were several big groups of Gould's females



And several big groups of Freetails, in two of the very large boxes and also in boxes 13 and 15. In fact we had more Freetails than ever before: 38 of them spread over four boxes



I was delighted to find on climbing to box 7 that some of the Black Wattles have now reached

maturity and were covered with blossom, which must be a great relief to the gliders. 13 boxes had big ant colonies, a problem peaking in spring. So they were all propped open with sticks and the ants promptly swarmed all over the box exteriors, gathering up their eggs and vacating.



Near the last box I decided to peep into glider box MF5 and found a family of four snuggled together so everyone became suddenly very brave about ladder-climbing to see such beautiful little animals



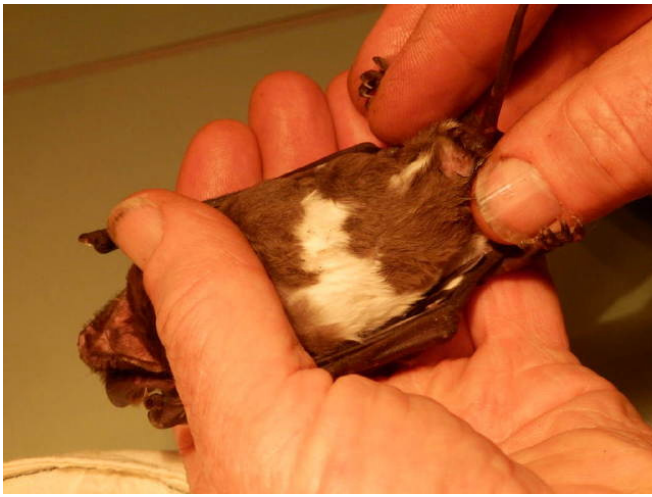
Towards the end we were running short of calico bags but fortunately Thea had some so we just made it



Debbie had been waiting for us a long time and was much relieved when we drove up the hill. Joe had given me a key to the visitor centre so we spent the evening in comfort and plenty of light. After the usual feast and chat we got stuck into the huge workload. Last year set a record of 243 bats for October, but this year it soared again to 270. Kate, Katie and Thea were fairly new to bat hand-ling, so it was a slow start with lots of stops for advice on immobilizing forearms and finding nipples and making judgments about reproductive condition. Debbie demonstrated Tigga Kingston's technique for holding a bat to keep it calm



Several Freetails had odd spots and one had a big belly stripe – very distinctive



The Biosis three had intended to leave at 6, as they all had to get to work next morning, but generously stayed until 10:30, and we were still only a third of the way through our 270 bats.



It was a very happy friendly team for the 3½ hours we were all there. Kate Senior stayed right to the end – we finished the last bat about 1:30 a.m. and agreed there must be some way to stop having 12-hour work sessions which leave everyone exhaust-ed



Down in the valley even the usually sluggish Free-tails were eager to fly off



So I got a couple of good photos of Freetails in flight



We left the park right on 2 a.m., through the front gate that had been severely bashed and bent by the vandals who crashed through it a week ago. It is now temporarily secured by a chain and the cost of replacing the gate and the mess in the Works Centre compound is more than the park's budget for the year.

Counting escapees there were 275 bats in 19 boxes, up from 243 last October. Only 8 of them still had wrist bands.

Box	Bats	Species	Adult M	F	Esc	Ban ded
C34	38	Gould's	1	37		4
C30	33	Gould's	1	32		3
C41	28	Gould's	11	17		
	5	Freetail	1	4		
C27	22	Gould's	3	19	1	
C22	21	Gould's	3	18	3	
C42	19	Freetail		19	1	
C23	18	Gould's	10	8		
C16	16	Gould's	4	12		

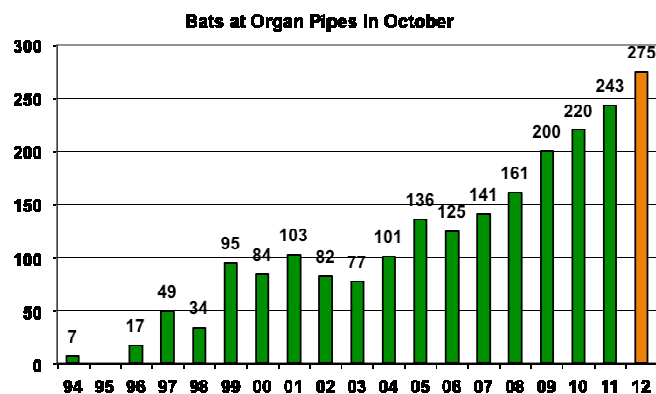
C25	13	Gould's	7	6		
C36	12	Gould's	2	10		
C31	10	Lge Forest		10		1
C15	8	Freetail	2	6		
C28	8	Gould's	4	4		
C33	8	Gould's	1	7		
C13	6	Freetail	1	5		
C01	2	Gould's		2		
C35	1	Gould's	1			
C40	1	Gould's		1		
C05		Gould's			1	
	269	Totals	52	217	6	4.17

Of the banded bats still appearing in our boxes, I have records for April, June, August and October. One bat has been there all 4 times, 2 bats have been there 3 times, and 4 bats have been there twice. So they all seem fairly loyal to the boxes and use them year-round

This table shows a sudden increase in box usage in October last year by Gould's, and the previous year by Large Forest Bats, then this year by Freetails

Year	2008	2009	2010	2011	2012
Gould's	150	156	152	216	226
Lge Forest	7	26	49	10	10
Freetail	4	14	16	16	39
Sml Forest				1	
Total	161	200	220	243	275

The last new box was installed in 2005, 7 years ago, yet there has been ongoing rise in the usage of the boxes in October. Some of that must be due to the ending of the drought and more successful bat breeding with more water and more insects, but there's probably something Malthusian going on as well, with population growing exponentially until it meets a barrier in the limits of the food supply.

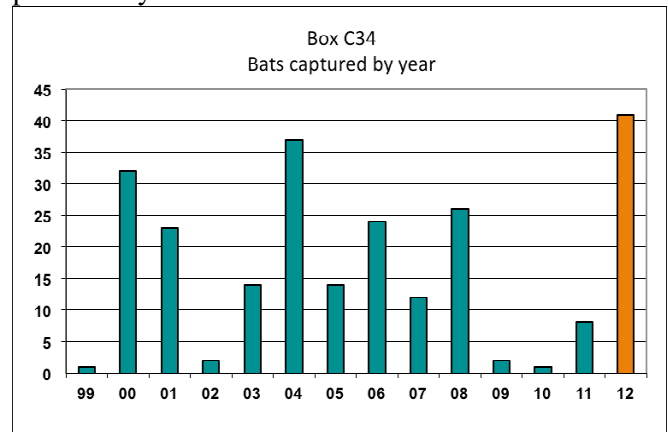


The ratio of males to females is fairly steady from January to July, then rises towards a summer peak. The average for October since 2005 is 5.4 and this year it is 4.2. The highest ratio occurred in 2007, at 10 females to 1 male.

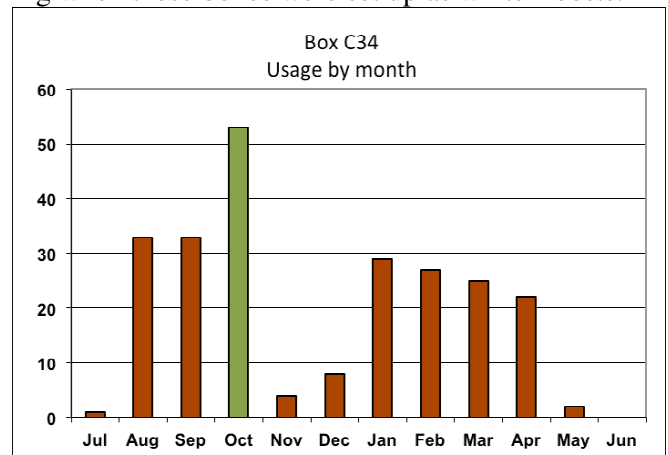
Box 34

This thick-walled box had the largest group of bats this month. It was installed in Sep '99 so we now have 13 years' records of its usage. It has been one of the least-used of the nine boxes of this type. The number bats recorded in these boxes ranges from 702 for box 30 down to 187 for box 33 which has a big problem with ant invasions. Box 34 has had 237 bats in it, including this month's 38, which is by far the biggest group ever found in this box. There were 22 in Jan '07, the next-largest group found there.

Usage of the box fluctuates wildly, being over 30 bats for the year in three years and well under 5 bats in four other years. We check the boxes 6 times a year and for the first two for this financial year we already have 41 bats for this box after almost zero usage the past three years.



Seasonal usage peaks from Aug-Oct and again from Jan to Apr, with almost zero usage in winter and early summer, the exact opposite of what we were expecting when these boxes were set up as winter roosts.

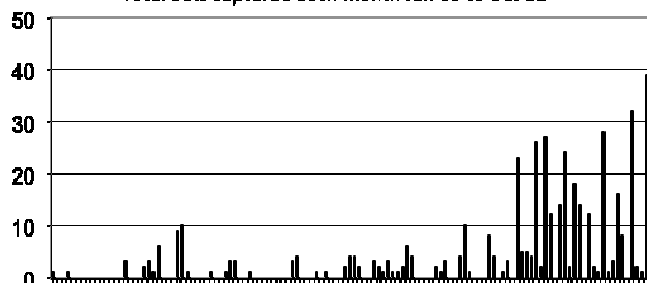


This picture here is a bit distorted as we have not checked boxes in the odd-numbered months since early 2008 so the impression that Aug and Sep are equally attractive to the bats may not be true.

Freetail

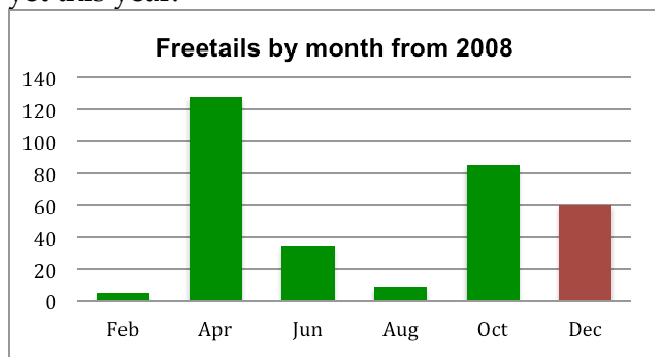
As we found more Freetails this month than ever before it is worth looking at our experience with this species. We found our first one in January 2000, and they appeared in ones and twos for a long time. From 2008 they have started using the boxes in much larger numbers, often over 20 and twice over 30 for the day.

TADARIDA AUSTRALIS
Total bats captured each month Jan 00 to Oct 12

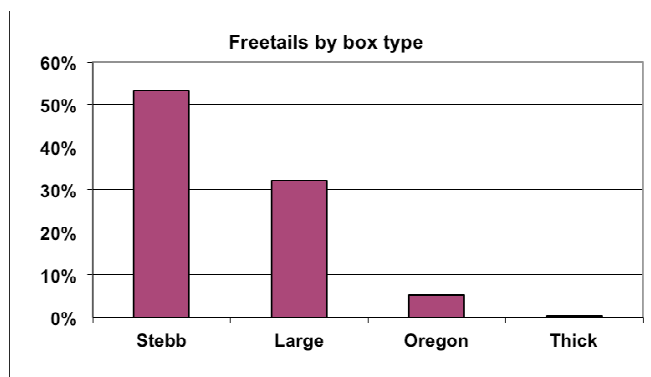


It has been a long wait for this to happen, but patience pays off.

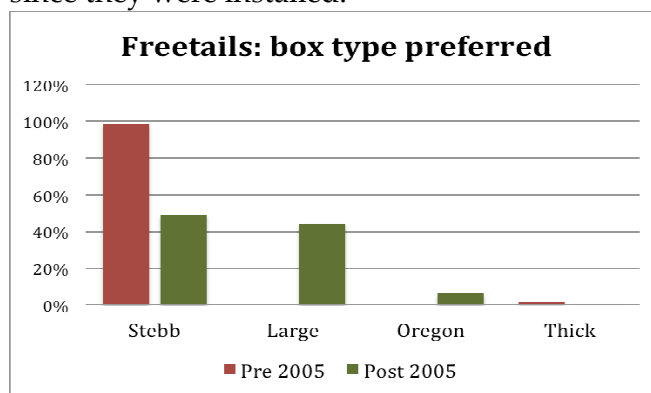
The seasonal pattern used to be a very strong peak in April and not much the rest of the year, but this is changing too, as October and December are growing as months in which we find many of this species. Haven't had December yet this year.



We have now captured 447 Freetails altogether. They very clearly favour the Stebbings design boxes (C13 to C17) which have attracted 53% of all the Freetails. The very large boxes (C41 to C43) have attracted another 32% of this species. The other boxes hardly any – partly as the entrance slits are too small in boxes C18 to C25.



As the very large boxes were installed 6 years after the first Freetails started roosting in our boxes, it is worth looking at what has happened since they were installed.



What is clearly happening is they used the Stebb-ings boxes while there was nothing else available that pleased them, but since the very large boxes were installed they have transferred much of their interest to these three boxes. Usage of other box types has remained very marginal.

Next box check: Sunday 9 December 2p.m.,

though I am very anxious about not coping with 400 bats as we get so few people to manage the huge summer workload.