

Organ Pipes bat box check: 13 April

Another beautiful autumn day, mild, windless and dry, brought out a good-sized team of box-checkers to help Stephen and me extract 195 bats from the boxes. Michael Bajer & Caroline Durre accompanied me to manage the bat hanger and ladder. Big groups of Gould's in several boxes. This is C14



As a diversion I peeked into glider box 2 and found a little family for Caroline to enjoy looking at.



One group of 7 Freetails in C43 with a male Gould's



And then more big groups of Gould's, nearly all banded: we have got just about the entire population



Pia and Lindy opened the Visitor Centre early to get started on processing bats. Eventually a big team of 15 gathered there in a busy circle. We had as bat handlers Lindy, Stephen, Pia, Tanja, Casey Visintin, new recruit Connor van Doorn, and a bit later, Debbie Reynolds



Casey worked with Anita Torrance



New recruit Rev Altmann, an animal carer, scribed for Tanja, and Wendy Furniss for Lindy.



Two of the Freetails had already been microchipped and responded with a beep to the wand Pia passed over their backs. The other 5 were new.



Caroline helped scribe for Stephen, who was micro-chipping. The banding of 16 new Gould's was shared by Lindy, Pia, Stephen, Tanja and one for Debbie Reynolds, on her way to becoming a bat bander.



Box	Bat	Species	Adult		Juvenil		Esc
			M	F	M	F	
C42	30	Gould's	15	15			2
C28	29	Gould's	11	18			
C32	26	Gould's	6	20			1
C30	19	Gould's	1	18			1
C13	17	Gould's	4	13			
C14	13	Gould's	1	12			
C17	10	Gould's	1	8		1	1
C07	9	Gould's	6	3			1
C27	7	Gould's	3	4			
C09	6	Gould's	2	4			
C36	6	Gould's	1	5			
C20	4	Gould's	2	2			
C23	4	Gould's	1	3			
C29	3	Gould's		3			
C15	1	Gould's		1			
C25	1	Gould's		1			C30
C43	1	Gould's	1				
C43	7	Freetail	3	4			
	193	Totals	58	134	0	1	6

Plus two dead Gould's, one in C34 and one in C37
6 bats escaped from C32 and were captured in glider box MF4! First time we have found bats taking refuge in a glider box

This year's catch is almost a return to what we had in 2010, a decline on the past three years: fewer of each species. 12.7% down on 2013.

Year	2010	2011	2012	2013	2014
Gould's	175	251	231	217	186
Lge Forest	15	4	13		
Freetail	18	28	32	8	7
Chocolate		2	1	1	
Total	208	285	277	226	193

We have had 10 old female Gould's over the past two years, but only two of them appeared this month. Each month since Dec 2012 one more seems to drop out, which possibly means they have died of venerable old age.

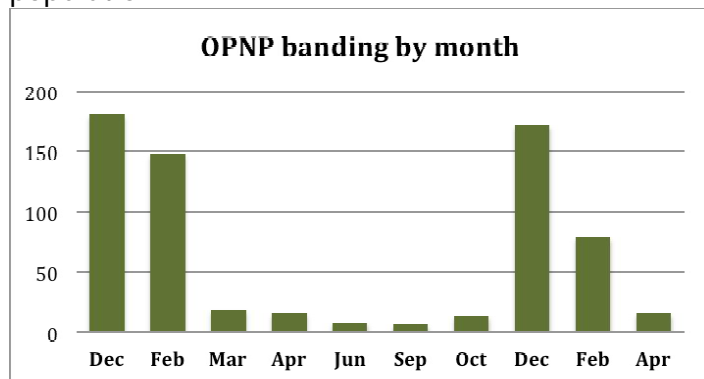
Gould's	Total	Male	Female	%
Adult '05	2		2	1.1%
Adults	178	54	124	95.7%
Sub-adult	5	1	4	2.7%
Juveniles	1		1	0.5%
Total	186	55	131	100.0%
Percent	100.0%	29.6%	70.4%	2.4:1

Banded bats

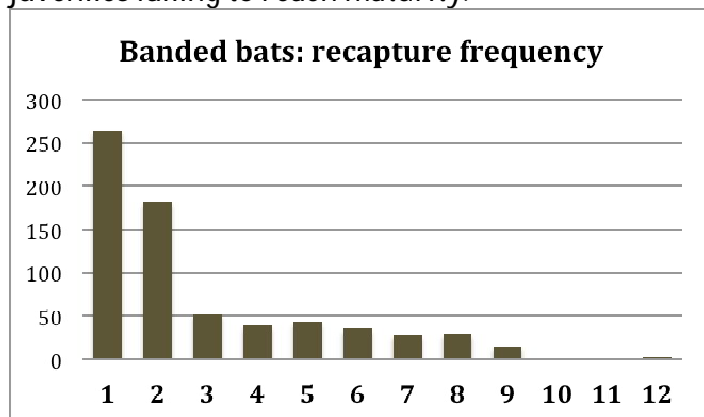
Since Dec '12 we have had 685 bands recorded, of which 9 have been replacements for bats with minor banding injuries or were not used as they were defective. 10 are old Gould's from the mid-2000s and another 5 are old Forest bats from the same period. That leaves 661 newly banded bats. Plus another 28 Freetails have been microchipped. Consistent with our experience since the mid-1990s almost 90% of our banding has been of Gould's.

Species	Male	Female	Total	%
Gould's	249	355	604	87.7
Large Forest	3	40	43	6.2
Southern Forest		1	1	0.1
Small Forest	10		10	1.5
Chocolate	2	1	3	0.4
Freetail	8	20	28	4.1
Total	272	417	689	100

Banding occurs mainly in late summer when the year's juveniles reach adult size, with just a trickle the rest of the year as adolescents disperse between colonies and some arrive from elsewhere to join our population.



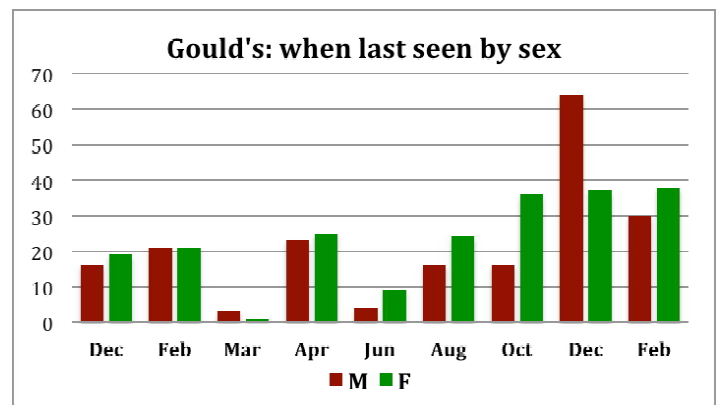
Most bats have been captured once only – obvious for this month's new arrivals, but also true of most of this year's young as the death rate in our very dry summer must have been quite large with many juveniles failing to reach maturity.



Only two bats have been captured 12 times in 12 box checks: 88866 and 88883, old females banded in the mid-2000s.

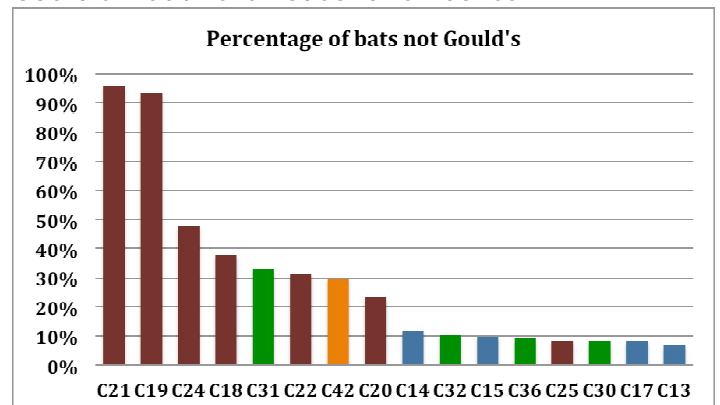
The 15 bats captured 9 times and the 29 bats captured 8 times are all female. Of the 28 bats captured 7 times only 3 are male. So 71 of the 74 most-captured bats are female, showing what a matriarchal system a bat colony is.

It is hard to be sure what has happened to bats not seen this month: they may be roosting elsewhere nearby, may have emigrated, or died. The big peak in disappearances was in December, of juveniles born after a bumper breeding season and encountering a very hot, dry summer. Some may reappear later in the year and then we can see the real level of disappearance each season.



Gould's and not-Gould's

Stephen's research into the conservation value of bat boxes has involved many little conversations about what can be extracted from my long-term spreadsheet records of which species use our boxes. One recent conversation led me to look at the percentage of bats we have found in each box that are Gould's Wattleed bats, and the percentage of other species, given that overall 90.1% of all bats found to date are Gould's. But this is not so for all boxes.



The small-entrance-slit boxes, 18 to 25, were intended to attract smaller species (Forest bats, Chocolate Wattled bats). Six of these boxes have done so very successfully, especially boxes 21 and 19.

Some of the thick-walled (45mm timber) boxes have been fairly successful in attracting Forest bats and one of the very large boxes (C42) which has had few issues with ants, has attracted a lot of Freetails.

C42 was installed in 2005, all the others before 1999. It takes a long time before such patterns as species-usage emerge for study. The rest of our 37 boxes each have less than 2% of non-Gould's bats. So one message from this project: if you want to attract a variety of species, set up a good mix of box volumes and entrance slit sizes.

Next box check, Sunday 15 June 2 p.m., to avoid the Queen's birthday long weekend