

Bats at Organ Pipes NP, 23 Oct '16

Steve and Danielle arrived early and had done most of the boxes by the time I arrived, finding a very big group in box 16



Steve & Dani installed several hollow-log boxes. All the bats I found were torpid, after a cool wet weekend during which they probably just slept through.



Decided to close a glider box propped open to make the ants leave, and found a Ringtail inside.



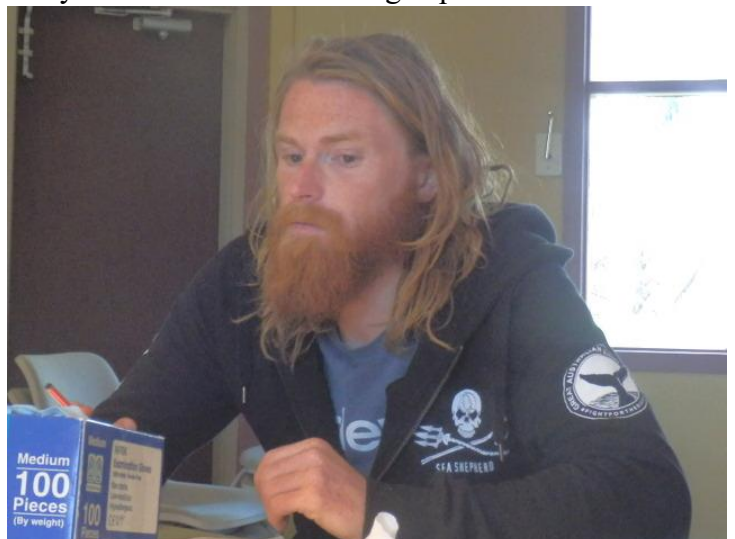
She leaped out and sat on a nearby branch to work out what I was going to do. She had been sitting on three young ringtails



Box 1 had 24 Gould's, all females



Andrew Mibus helped me with the ladder and we were soon done and drove up to the Visitor Centre to join the small team there – Lindy, Caroline Durre, Casey and Anita, and Nick Swinton, from Mornington, who came last year with Paul Bertuch's group.



He scribed for Casey, and I for Anita. Danielle is working towards a banding licence, so did all the new bands.



Steve worked mainly on PIT-tagging new Freetails, 8 of the 17, and taking a few tail membrane samples.



Andrew made his first venture towards learning bat-handling skills, processing some Freetails, working out how to hold them to measure forearm length, and get them into and out of a ziplock bag for weighing



One female Gould's had a nasty banding injury, so its band was removed and the wound medicated by Lindy. Near the end of the session, the old bat 88866 turned up

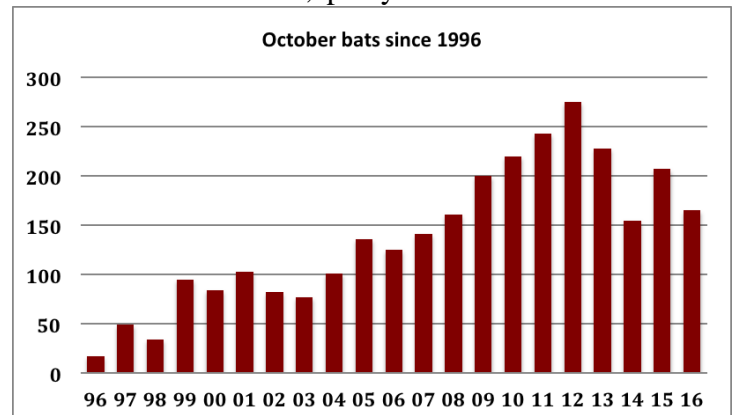


She should now be about 11-12 years old, banded early 2005. We were all done by 7:30, so everyone went off home, but Danielle and Andrew stayed to help release the bats, which all flew off quickly. Two young Gould's were found dead in two boxes. Their first year is the toughest. And next day:



October bats

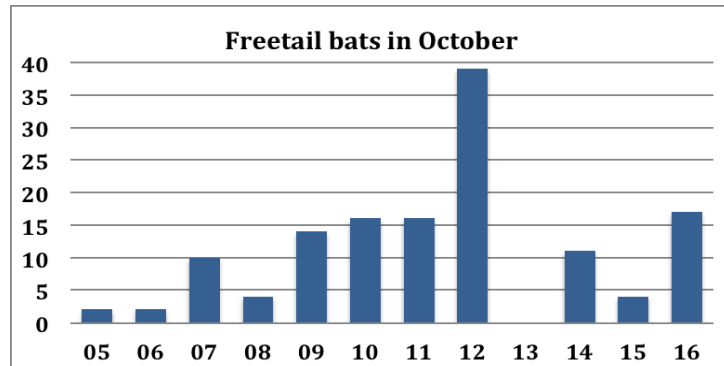
Capture rate in Oct. peaked in 2012 at 275 bats and has declined a fair bit since, partly due to the absence of



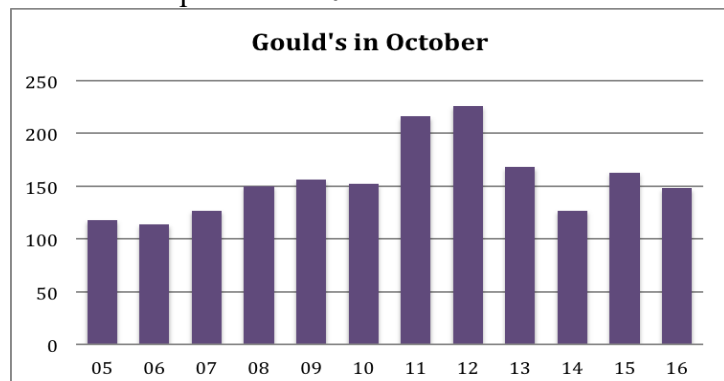
Large Forest bats this month, but also a considerable drop in the number of Gould's and Freetails using the boxes. We finished up with 149 Gould's and 17 Freetails, over half in the boxes of Stebbings design (13 to 17, 44), and 20% in the three very large boxes (41 to 43)

Box	Bat	Species	Adult	
			M	F
C16	53	Gould's	4	49
C01	24	Gould's		24
C44	16	Gould's	8	8
C14	12	Gould's	1	11
C40	11	Gould's	6	5
C43	10	Gould's		10
	7	Freetail	2	5
C20	10	Gould's		10
C17	6	Gould's	2	4
C41	6	Gould's		6
C20	4	Gould's	4	
C25	3	Gould's	2	1
C42	2	Gould's	2	
	8	Freetail	3	5
C22	1	Gould's	1	
C28	1	Gould's	1	
C13	1	Freetail		1
C15	1	Freetail		1
	165	Totals	36	129

Freetails also peaked in 2012, we had none in Oct 2013, and very few the last 3 years, though it's back to the level of 2010/2011.

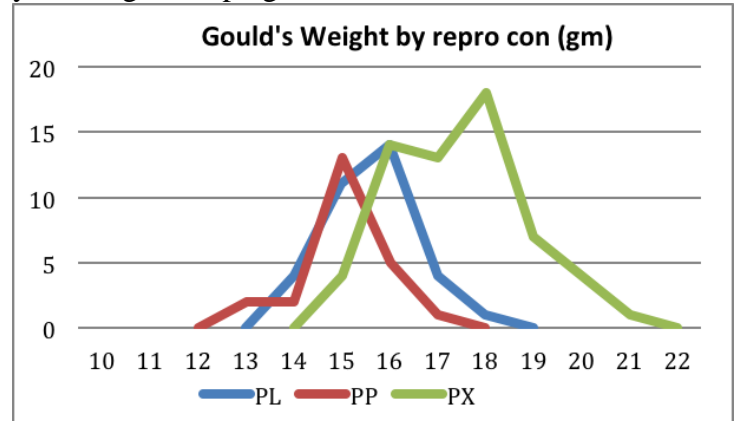


Gould's also peaked in 2012:



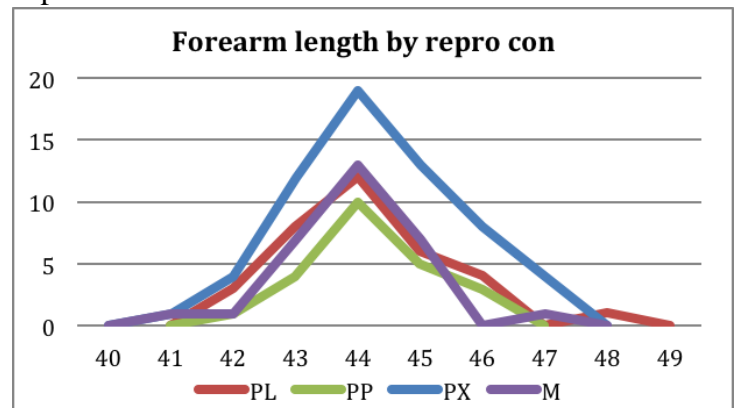
Pregnant or Post-lactating?

61 of the Gould's were judged to be pregnant, and another 34 to be post-lactating (bred last year, not apparently pregnant this year). Pregnancies may be a bit late this year, so it is possible some of them were just in early stages of pregnancy with no obvious belly-bulge yet. The other 23 were judged to be prepartous, never yet having been pregnant.



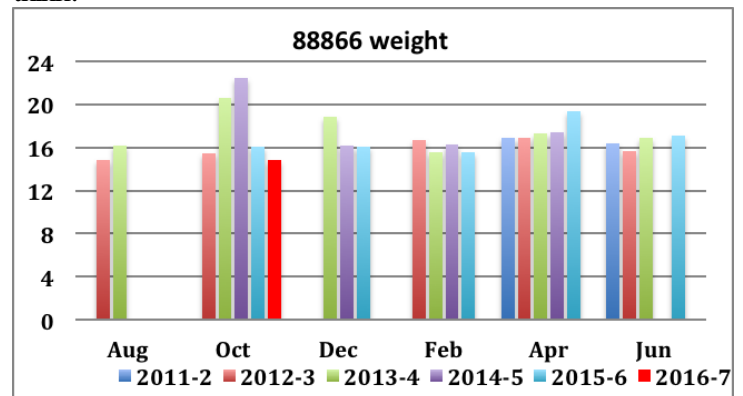
The weight records are convincing that most of the judgments are right, but we'll see for sure in Dec., which ones have pups.

By contrast, forearm length distributions are almost identical for all four groups, including males. So males and females are the same size in body and arm length, but males are generally lighter weight, and females expand and contract far more than do the males.



Old female 88866

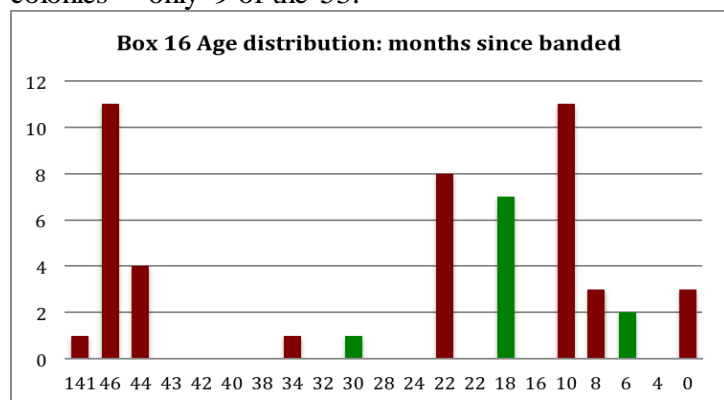
She was banded by Natasha Schedvin in early 2005 I think.



My first record is from April 2012. In the 28 box checks since then, she has been captured 24 times, so we have a fairly complete weight record for her.

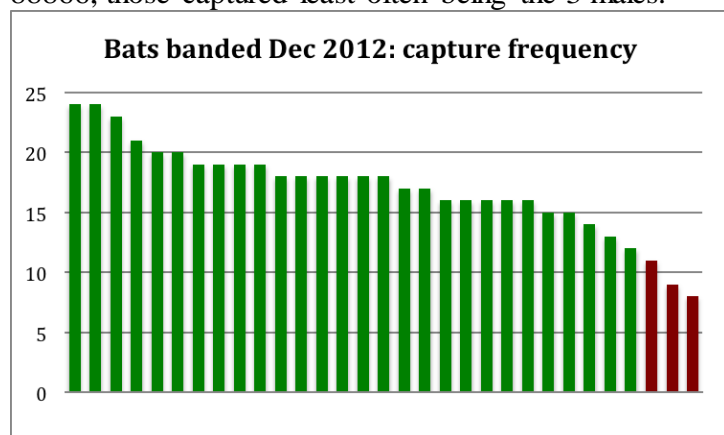
Previous Oct. records show obvious pregnancies under way in 2013 and 2014. Much lighter in Oct. 2015, never –the-less she was judged to be lactating in December. This year she's even lighter and may be having a year off as she's now a very old bat.

She was with the very big group of 53 bats in C16, possibly much older than the next younger bat, but possibly not. No banding was done from 2005 to 2012 so we don't know. But there seems to have been a mix of 4,3 and 2 year-olds and a lot of youngsters born spring last year, plus possibly a few immigrants. I've coloured green the columns for bats banded in April, supposing them to be immigrants dispersing from other colonies – only 9 of the 53.



Bats banded in Dec 2012

Banding recommenced that month, with 9 bats banded by Natasha recaptured (only 88866 remains now, the others having died) plus 163 new bands attached. 31 of them were still captured this month, almost 4 years later so 132 of them were not there this month. The 163 have steadily dwindled down to the 31 now remaining, 3 males and 28 females. They are, of course, the most often-captured bats, two of them captured as often as 88866, those captured least often being the 3 males.

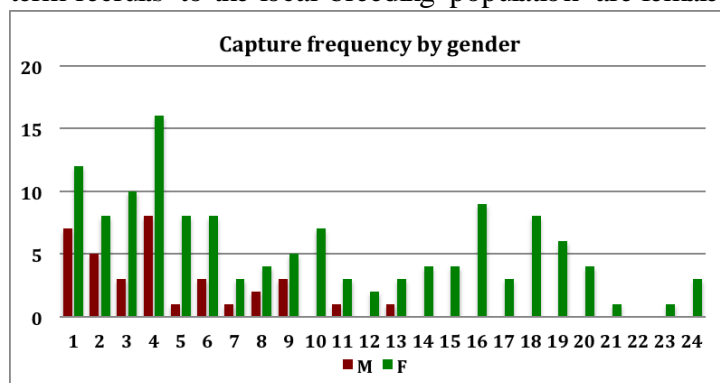


They seem to still like being together, as most of them

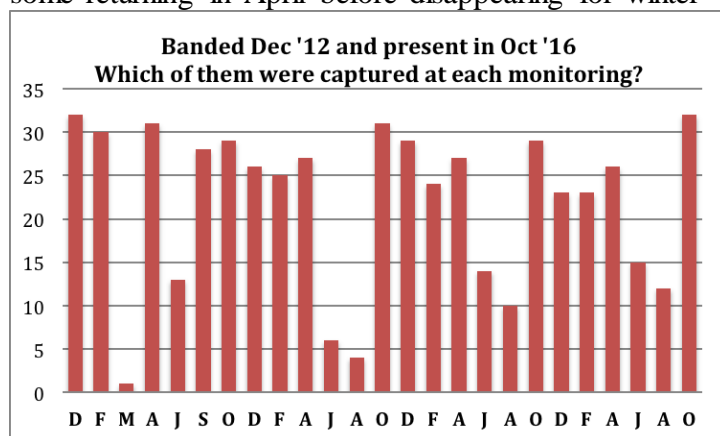
were clustered in 4 of the 16 occupied boxes. 12 were in box 16, 5 each in boxes 1 and 14 and 3 more in box 41. Something to work on over the next week is how often any two have been found together, which ones are best mates and which are relatively marginal.

Capture frequency

Over the 24 box checks since banding recommenced in Dec. '12, nearly all the bats recaptured more than 9 times have been females. There are probably three reasons for that – females are more robust and live longer, females are more attached to a home range and are found there more often than wandering males that come and go, and more males emigrate as part of the process of avoiding inbreeding, so nearly all the long-term recruits to the local breeding population are female

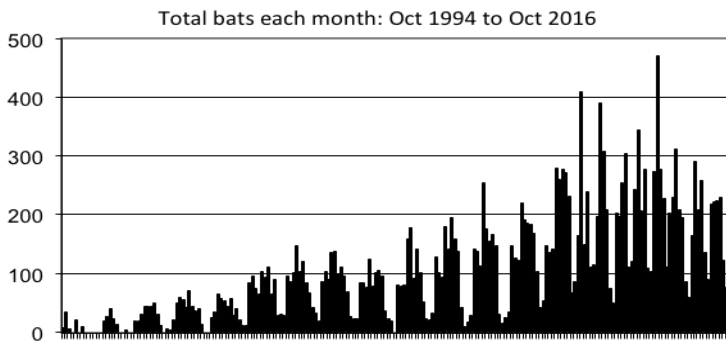


Bats 92336 and 92337 have been found in the boxes at every monitoring session, and 92393 was absent only once. They probably form the core of the local community. Most of them find winter roosts elsewhere, but reliably return each spring. A very few, like 92336 and 92337, remain even through winter. The peak number each year is generally in October, with fewer in Dec., some returning in April before disappearing for winter



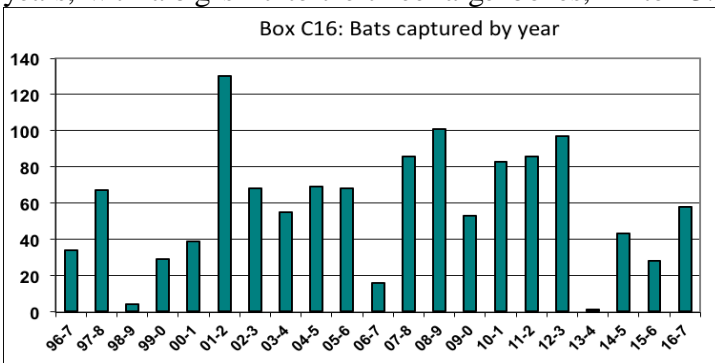
Bat box history

This month's catch takes the total bats captured over our 22-year project to 21,803, of which 19,619 (90%) have been Gould's and 648 (3%) have been Freetails. Number of bats peaked at 470 in Dec. 2012, so that was a very long work session. In Dec. 2015 there were only 220, less than half of the peak level.

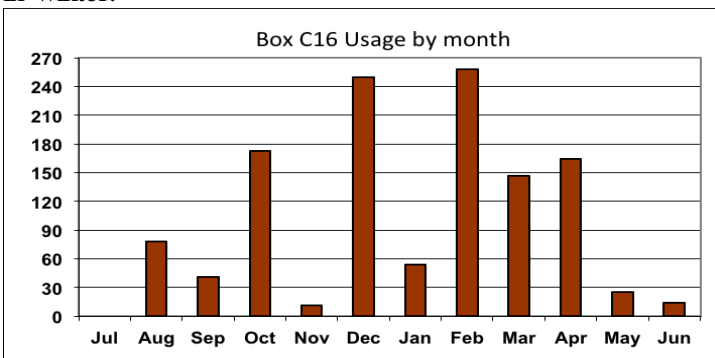


Box 16

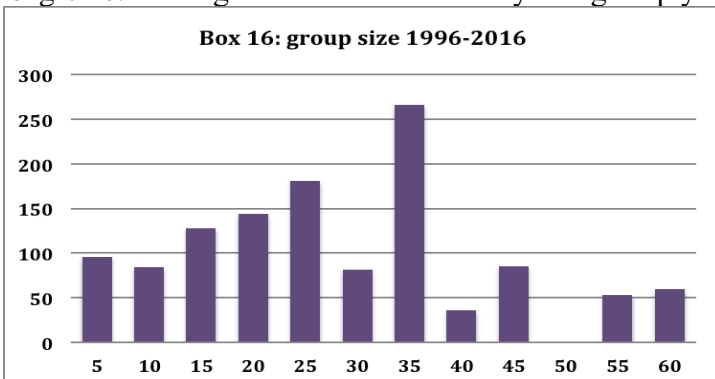
Boxes 15 and 16 have always been strongly preferred by Gould's bats, and are the only boxes to have records of over 1,000 bats. 16 overtook 15 several years ago and now has had 1,215 bats recorded in it since installation in 1996. It has somewhat fallen out of favour in recent years, with a big shift to the three large boxes, 41 to 43.



We stopped checking boxes in odd-numbered months early in 2008. The chart shows box 16 is much-used in summer, a bit less in spring and autumn and much less in winter.



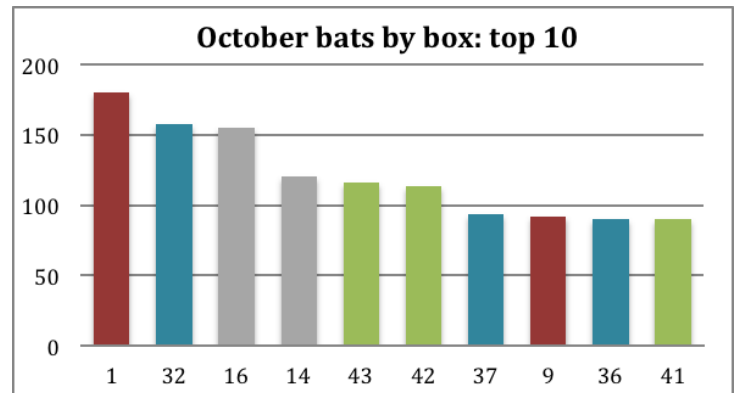
This month's 53 bats is the biggest rate of usage in a long time. It's big catch is due to it rarely being empty.



There were 60 bats in it in Dec. 2008. It attracts many groups of 31-35 bats, a few very large groups and quite a lot of small groups.

Which boxes are preferred in October?

We've checked the boxes in Oct each year. From 2005 when the three very large boxes were installed, the top ten boxes used in Oct have been:



Red ones are the original Oregon boxes, grey are the 1996 boxes with standard Stebbings entrance slit sizes, blue are the thick-timbered boxes and green the 3 very large boxes. The bats don't seem to favour any one box design, but they avoid the small boxes and the ones most often targeted by ants. It would be interesting to know how similar the microclimate in these ten boxes is during October, and how different from the ones used very little, such as 38 and 39.

Banded bats

This month 9 Gould's were banded, and 9 Freetails microchipped. That takes the total project to 1100 banded bats and 109 chipped Freetails. From the start in Dec 2012 when 190 bats were banded, and the first few microchips in April 2013 it has grown far larger with several sub-projects making use of the Organ Pipes colony, so many new things are being learned about these hard-to-study animals.

Next box check: Sunday 11 December 2 p.m.