

## Bats, Organ Pipes NP, 24 June '18

We had a very fine windless day for our June box monitoring, and just a small team of helpers. Steve and I did all the boxes, with much show-and-tell as most of the assembled crowd of 12 were first-timers, including a young scout eager to earn an environment badge. My camera had died so these photos are courtesy of Ashley Bubat who kindly emailed them to me.



Showing why a Freetail is a Freetail (there were 8 in box 14, all females) and a demo of how to hang a bag on the hanger



As always, the catch was dominated by Gould's Wattled bats, in quite large groups for winter – box 33 had 36 of them. All the bats were quite torpid and very cool when extracted from the boxes and woke up a bit cranky about having their slumbers disrupted.



Steve had a group around him eager to see tiny bats and learn a few things about them.



There was a large collection of young adults and children to experience bats for the first time. These photos are contributed by Shane:



Luckily, the few boxes I emptied had two species, so everyone got a good look at the variety among bats.





We had a just-right team in the Visitor Centre, with several of the first-timers pitching in to scribe.

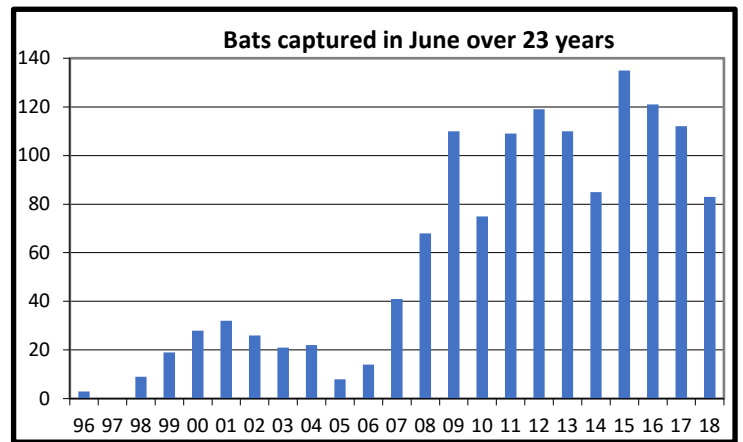


There were 83 bats

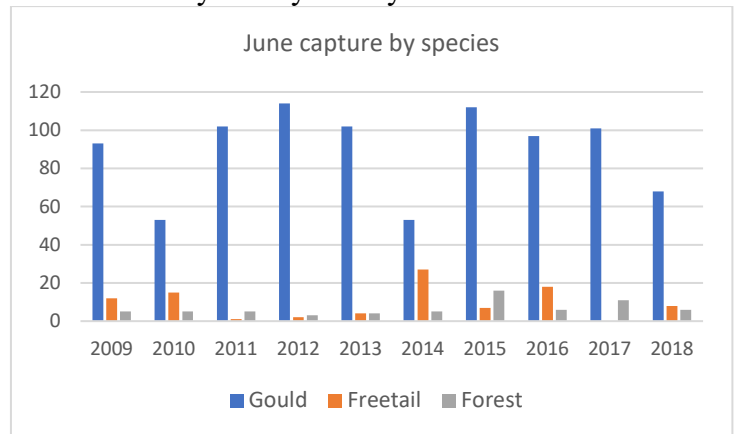
Box	Bat	Species	Adult M	Adult F
C33	36	Gould's	5	31
C30	16	Gould's	4	12
	1	Lge Forest		1
C46	11	Gould's	4	7
C14	4	Gould's	4	
	8	Freetail		8
C19	6	Lge Forest	2	4
C47	1	Lge Forest		1
	<b>83</b>	<b>Totals</b>	<b>19</b>	<b>64</b>

### June bats

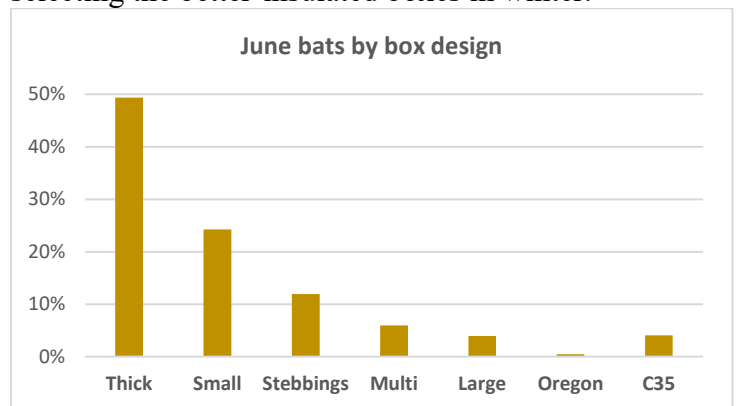
Early winter bats peaked in 2015, at 135 and have been declining each year since then. Winter catch had been quite small until it suddenly took off in 2007, near the end of the millennium drought. The last few boxes had been installed two years earlier, so that doesn't seem to be the cause. It's now back to where it was in 2014



Since 2009 there have been 895 Gould's, 94 Freetails and 66 Large Forest bats in June, a total of 1055 bats in a decade, so an average of 105. All three species fluctuate wildly from year to year.



Just under half have been in the 9 thick-walled boxes which were intended to be winter roosts, and another quarter (mainly the smaller Large Forest Bats) in the small boxes with small entrance slits. So these two box designs dominate early winter bat preferences. This means the bats are doing what we hoped they would – selecting the better-insulated boxes in winter.



And 60 of the 67 (90%) Large Forest bats captured in June have been in the small boxes that were designed to suit them.

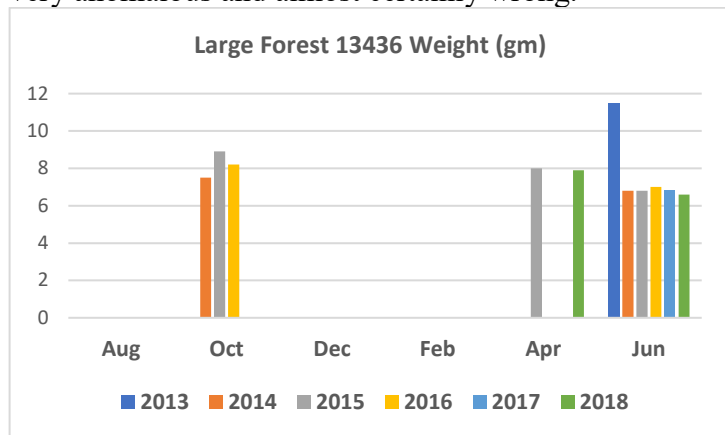
The Freetails choose between the normal "Stebbing's" boxes (13 to 17, 27, 44) and the very large boxes (41 to 43). In the past decade there has been a definite shift of preferences away from the big boxes to the older

Stebbing's boxes, possibly driven by ant invasions. From 2009-13 the numbers in each box type were nearly even, but from 2014-18 the ratio is 4:1.

Years	Stebbing's	Large
2009-13	17	16
2014-18	48	12
	65	28

### Large Forest bats (*Vespadelus*)

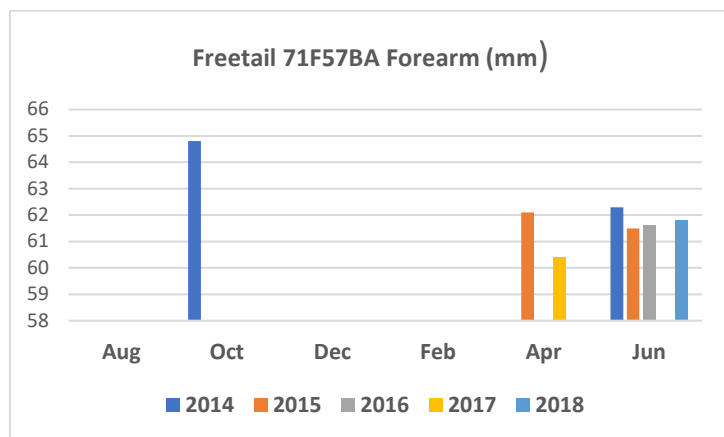
The eight bats of this species comprised one old female banded in June 2013, and 7 young bats from 2017 and 2018. The old bat 13436, has been captured each June from 2013, 3 times in October and twice in April. So she is an autumn/winter and spring visitor. Now captured 11 times, her weight record shows the usual increased bulk in October (late pregnancy and fall in winter (nothing to eat. The first record of 11.5 gm is very anomalous and almost certainly wrong.



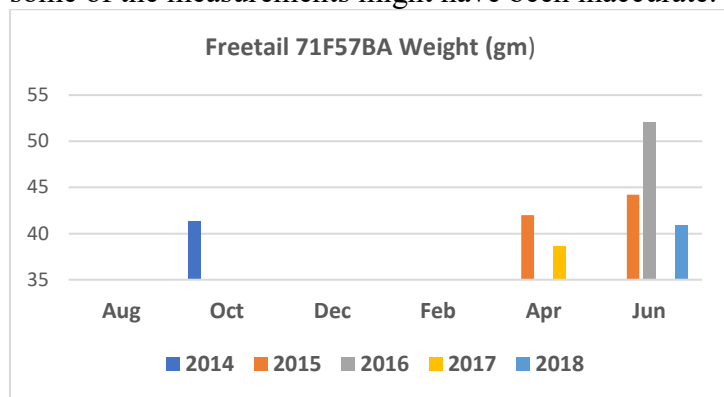
### White-striped Freetail



There were eight of them, all in the one box, C14. 152 Freetail have now been PIT-tagged, 108 of them (71%) captured once only, another 27 (18%) twice. So most Freetail are just passing through and not part of a long-term local population.



One Freetail this month was captured for the 7<sup>th</sup> time: female 71F57BA, 4 times in June, twice in April and once in October – much the same pattern as the old Large Forest Bat. Her forearm record fluctuates a lot, so some of the measurements might have been inaccurate.



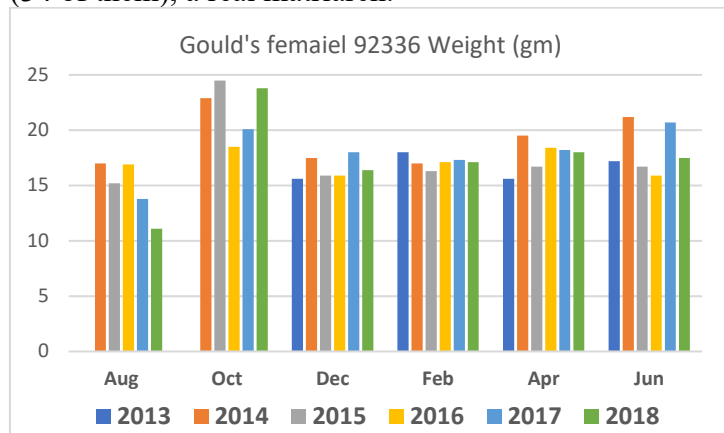
Her weight record is even more anomalous. The three June figures don't have any pattern at all. Very odd.

### Gould's banded in Dec 2012

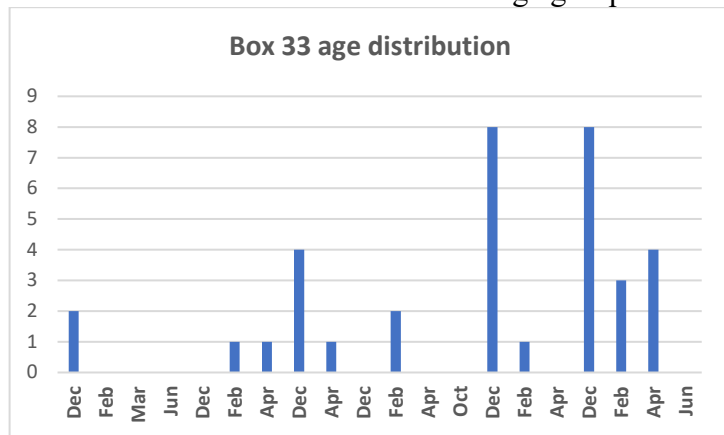
156 bats were banded at our first banding in Dec 2012. Five of them were still in the boxes this month – 5½ years later, all of them females.

#### 92336

She was lactating when banded in Dec 2012, so at least a year old, and has been through a pregnancy each year since. Some of her weight records are hard to believe – the increase from Aug to Oct some years is a doubling of her weight. She has been present at every box check (34 of them), a real matriarch.



She was with 92322, another elder of the community, banded the same month with a mixed-age group. Four



number of home-grown females join the adult breeding population instead of emigrating.

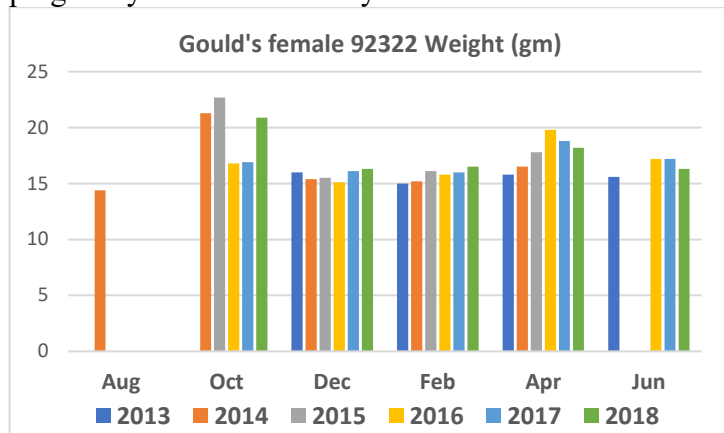
All the Gould's had already been banded, so Lindy banded only two Large Forest bats that were new to the area and Steve PIT-tagged two new Freetails.

**Next box check: Sunday 5 August, 12 noon**

generations in one box, some of which might be her great-grandchildren side-by-side with this season's children. The column at far left is 92336 and 92322.

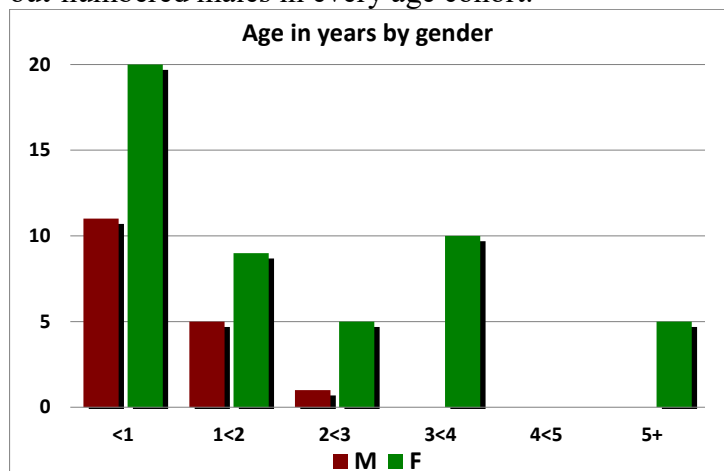
### 92322

She is the other matriarchal female found in the same box as 92336, and has now been captured 28 times, usually being absent in August, wintering elsewhere, but reliably back in October each year to spend her pregnancy in the community.



### Age distribution

As usual, all the oldest bats were females and females out-numbered males in every age cohort.



Each autumn and spring, apparently all the young males leave and most of the young females, but a small