

Organ Pipes bats 28 April 2012

It was a bit breezy but a pleasant cool autumn afternoon for batting. Lisa had sent along a batch of her students, and Susannah Hale brought her parents. So we had plenty of helpers to manage two ladders, Steve on one, and me on the other



I started at box 16, which along with C25 on the same tree, both were full of Gould's Wattled bats



The three very large boxes all had Freetail bats and C41 had 14 of them, the largest group we've ever found of this species. Altogether we collected 32 Freetails, another record for this project for a single box check. All afternoon there

were no escapees, as most bats were a bit torpid in the cool air. Box 20 had 44 Gould's in it and was hanging by a thread of a corroded screw, so I took it off the tree, to replace screws with coach bolts.



Trevor Pescott had emailed me the day before: *I'm convener of the fauna study group in the Geelong Field Naturalists Club, and carry out much of the mammal trapping that the Club does each year under DSE and AEC permits. We operate two harp traps for bat study and regularly trap the usual forest, long-eared, wattled and similar species, but have no direct contact with the White-striped Freetail Bat although we do hear them on occasions. Is there any possibility I could join your group on occasions to have a look at the species that you find in your bat boxes, and indeed learn more about the box study? Perhaps we can develop a similar program here as there are obviously places where bat boxes could be installed. I'm aware of the problems that a half-hearted program can create, and some boxes installed here in the past have been a dismal failure. I'm involved with the Friends of Buckley Falls who have been to the Organ Pipes on occasions to compare your work with that undertaken here. So I wrote to him that April was the best month for Freetails and he came all the way to see one, got some good photos and left very happy.*



A digital scale is shown with a small amount of dark material being weighed. The scale's display shows 0.00g and 0.00g. The brand name 'Tortan' is visible on the scale.

We worked at top speed but still didn't get to the last bat until 10:30, then went down to the Pipes and spent 20 minutes releasing 277 bats to fly off into the dark. Fortunately the Freetails were eager to get away instead of sitting on bags for 10 minutes thinking about it



We finished up with 277 bats of four species, much the same as last year but fewer Gould's and more Large Forest bats.

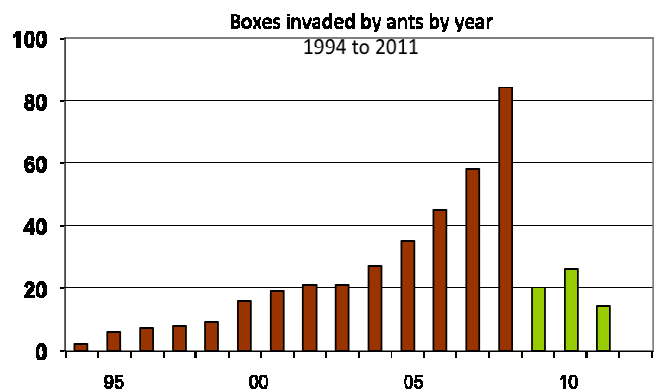
Box	Bats	Species	Adult M	F	Juv M	F
C20	43	Gould's	8	35		
C30	39	Gould's	12	27		
C41	33	Gould's	24	9		
	6	Freetail		5		1
C23	25	Gould's	13	12		
C28	25	Gould's	9	16		
C22	20	Gould's	1	19		
C01	15	Gould's	10	5		
C42	14	Freetail	2	12		
C25	13	Gould's		13		
C29	13	Lge Forest	2	11		
	6	Gould's	3	3		
C16	9	Gould's	1	8		
C14	5	Freetail		5		
C15	4	Freetail		4		
C33	2	Gould's	1	1		
C05	1	Gould's		1		
	1	Freetail	1			
C07	1	Freetail	1			
C21	1	Chocolate	1			
C43	1	Freetail		1		
	277	Totals	89	187		1

Freetails peak in their box usage in April, and this year is true to form.

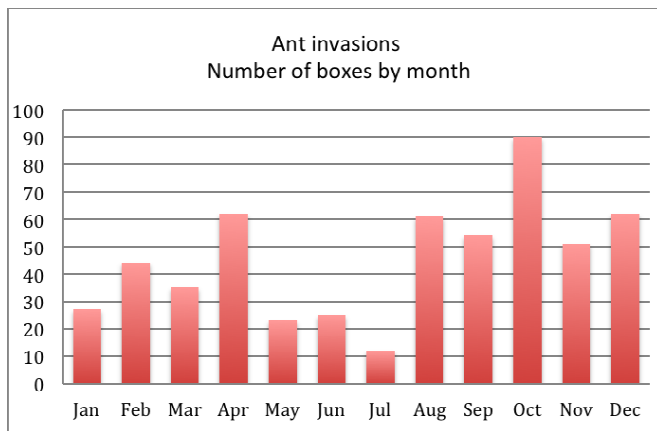
Year	2008	2009	2010	2011	2012
Gould's	208	207	175	251	231
Lge Forest		3	15	4	13
Freetail	23	27	18	28	32
Chocolate				2	1
Total	231	237	208	285	277

Ants in bat boxes

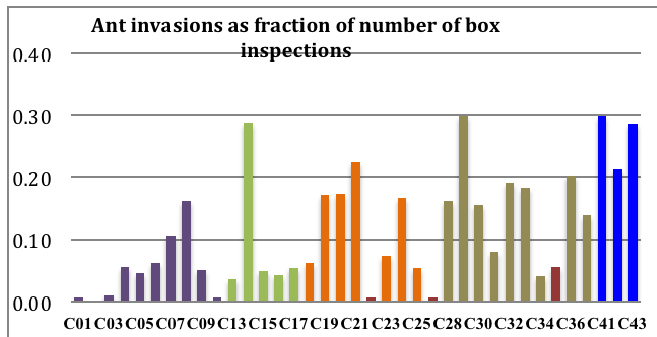
This was my topic at the recent bat conference, so here is a brief summary of what seems to have happened. We started in 1994 with ten boxes and every couple of years added more, ending in 2005 with the three very large boxes (C41 to C43). The ant problem also started fairly small but after 2004 seemed to be taking off exponentially. Then it suddenly collapsed when we moved to checking the boxes each second month from early 2008 – you would expect the incidence of ant invasions recorded would halve, but the exponential growth has ended. Some of it has involved ants shifting their attention to the new glider boxes.



Each year the seasonal pattern has been fairly similar, with ant activity peaking in spring and early summer, with a smaller peak in April. This coincides with peaks in bat activity, so the ants, by making some boxes unavailable to bats, affect the pattern of seasonal and annual usage by bats of the boxes they invade.

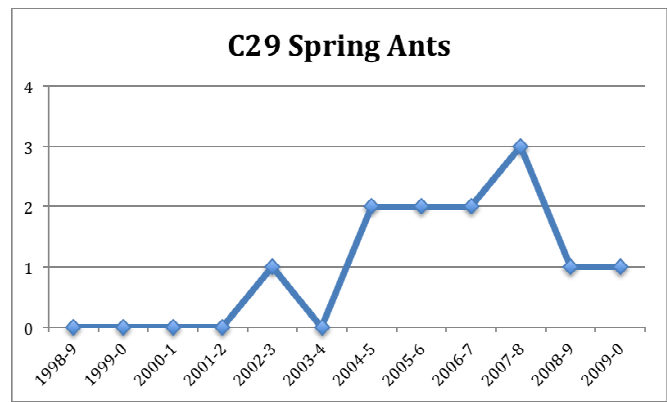


The ants do not seem to target particular box designs – architecture is of no interest to them – they just want dry spaces to use as breeding sites. So the boxes, when grouped into clusters of the same design (Oregon, small, large, thick-walled etc) show that one or two of each group get targeted often by ants, while others are largely ignored. The only exception is the three very large boxes, which the ants love as much as do the bats.

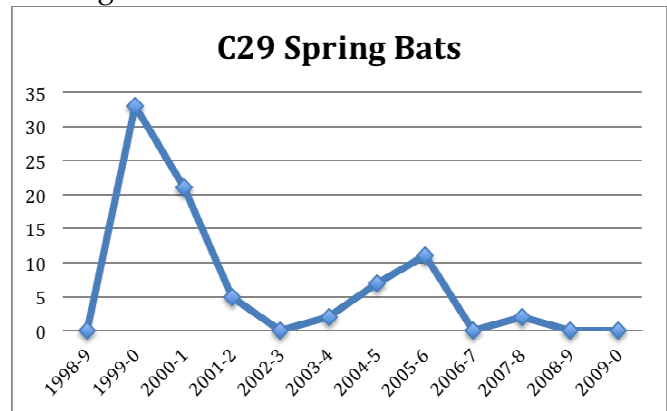


The purple columns are the original ten Oregon boxes, the pale green ones were put up in 1996, with 15 mm entrances, the orange ones are small, the khaki ones are thick-timbered, and the royal blue ones are the very large boxes.

As an example of the impact of the ants, look at box 29, one of the thick-timbered group. It has had ant colonies in it on 41 occasions, and in 2010-1 a glider group for a few months. In the early year, the ants targeted this box mainly in autumn, so the bats avoided it during this season. Since 2004 the ants have changed tack and now target the box mainly in spring (Aug – Dec), so the box is now much less used by bats during this period. Two charts illustrate the changing pattern, one of ant invasions in spring, the other of bats found in the box in spring.



The box was little invaded by ants during spring for its first four years but has increasingly been the target of ant colonies since 2004.



Bats used this box much more in spring before it became the target of ant colonies. Bat usage in spring has now declined to almost zero.

There are many interesting patterns to be found in our long-term data collection, and the see-saw relationship between bats and ants is just one of them.

Some of the Melbourne Uni students left without giving me their names, but here are the ones I got: Jess Rowland, Paul Yacoumis, Samantha Walker, Tarryn Handcock, Diana Crombie. We also had Susannah Hale from Deakin with her parents, Trevor Pescott from Geelong, Eva Reda, Michele Olson and Nel Tanti, Steve and me.

Next box check will be Saturday 23 June at 2 p.m. Winter solstice