

## 1MetalYellowYellow

If you ever want to read 600 pages of science and be thoroughly entertained as well as educated then I thoroughly recommend the Song of the Dodo by David Quammen.

I like this page the best

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nation of Foster's rule. Case called the paper "A General Explanation for Insular Body Size Trends in Terrestrial Vertebrates," though the generality promised by that title was elaborately qualified with particulars. Running to eighteen pages, it was both long and full. It included a survey of the empirical data, a discussion of various conceptual and mathematical models describing the factors that determine body size, a discussion of how those models might discriminate between mainland and island situations, a section on testing the models' predictions, a section on apparent exceptions to what Case himself had proposed, a section subtitled "A Further Corollary," and, back beyond its three-page list of cited sources, a mathematical appendix for the delectation of the zealous. It was a fine example of what theoretical ecology has come to look like in the postrevolutionary age. Whereas the little paper by J. Bristol Foster had said common-sense things like this:

	<i>Smaller</i>	<i>Same</i>	<i>Larger</i>
Marsupials	0	1	3
Insectivores	4	4	1
Lagomorphs	6	1	1
Rodents	6	3	60
Carnivores	13	1	1
Artiodactyls	9	2	0

the paper by Ted J. Case said things like this:

*Model 1:*

$$1A) \quad dR/dt = rR(1 - R/K) - WRC/(M + R)$$

$$1B) \quad dC/dt = -dC + WRC/(M + R)$$

and this:

*Model 3:*

$$3A) \quad dR/dt = F - WRC/(M + R)$$

$$3B) \quad dC/dt = sC(1 - C/\bar{J}R)$$

in which  $R$  represents the food resources on an island,  $C$  represents the species consuming those resources, and  $dR/dt$  represents the fact that life is too short for you or for me to be expected to comprehend calculus.

This has partly inspired me to tell you the story of Bar-tailed Godwit 1MYYY. He is one on the 5,012 (Black-tailed Godwit 391, Bar-tailed Godwit 1,321, Red Knot 1,529 and Great Knot 1,771) birds that GFN and the Broome volunteers have colourbanded as part of the shorebird demography project over the past 13 years.

The thing for me is that 1MYYY was the very first of those 5,012 birds and is still alive and well and regularly recorded in the bay. Another interesting thing is that the code I put on him (and 18 others) was an error! I have misinterpreted the information sent to me by Phil Battley. And he should have been 1YYYY, the godwit, not Phil. I was horrified at my mistake but Phil and Theunis pointed out to me that it didn't matter as the code was still a unique code.

If you want to see what 5,012 banded birds and the subsequent ten's of thousands of resightings can produce with all that terrifying statistical stuff then look here;

<http://globalflywaynetwork.com.au/wp-content/uploads/2015/12/JApplEcol2016-simultaneous-declines-in-summer-survival-along-EAAF-signals-flyway-at-risk-Piersma-Lok-et-al.pdf>

Or for a basic look at how one bird uses of the bay keep reading below.

1MYYY and various people have shared 99 'encounters' each and every one from Roebuck Bay.

1MYYY was banded 30-12-2005 (yes we were that dedicated when we were 13 years younger!) He was aged 2+, in his second year of life or older, and sexed, initially on measurements and subsequently with DNA from a tiny blood sample. He was also caught 20-09-2015. 9 years and 9 months later. This second capture enabled us to replace his yellow flag that had fallen off sometime between 23-09-2012 and 22-10-2012. This is where the fact that I had made an error in the initial banding came in very handy. If a flag falls of any other code it is usually impossible to tell which bird it is. If a bird is marked as 1YBRL and then X(missing)YBRL is seen missing a flag it could be, depending on one or two factors, 1YBRL, 2YBRL, 3YBRL, 4YBRL etc. I can work out a few of them from earlier in the project with Bar-tailed Godwits if we can reliably determine the sex in the field views. But it is rare and increasing difficult.

Below, without any complicated symbols divided by other complicated symbols, is the breakdown of his resighting history by year to 24-10-18, 12 years and 10 months apart.

YEAR	CAPTURE	SIGHTINGS	
2005	1	0	30-12-05
2006		3	
2007		2	
2008		5	
2009		4	
2010		7	
2011		14	
2012		13	
2013		7	
2014		8	
2015	1	8	20-09-15
2016		11	
2017		9	
2018		6	
	2	97	

By month.

MONTH	CAPTURE	SIGHTINGS	LATEST/EARLIEST SIGHTING
JANUARY		1	
FEBRUARY		7	
MARCH		18	
APRIL		2	04-04-12
MAY		0	
JUNE		0	
JULY		0	
AUGUST		1	31-08-18
SEPTEMBER	1	18	
OCTOBER		18	
NOVEMBER		19	
DECEMBER	1	13	
	<b>2</b>	<b>97</b>	

Last sighting before northward migration is usually in late March with just 2 from very early April and first sighting on return after southward migration is usually before 13-09. The table above shows that 1MYYY has left Roebuck Bay every breeding season, so let's hope at least two chicks have made it to adulthood from his and his partners efforts.

I believe that Roebuck Bay is, for the purposes of birds roosting preferences, split in to eastern and western sites. For those of you who know the bay the eastern sites are Little Crab Creek to Tattler Rocks and the western ones Campsite to The Port. I actually expected 1MYYY to come out more strongly as an 'eastern bird'. If birds are 'eastern' I think only heavy disturbance causes them to move to the west and western birds either bird of prey disturbance or on the tides just after neaps when they appear on the eastern roosts. So 1MYYY roams a bit more than some I think.

I am sure some calculus could expand on this. But-----

	EASTERN SITES	WESTERN SITES	
CAPTURE	2	0	
SIGHTINGS	61	36	<b>97</b>

So there you have it, my take on 1MYYY and a few other things. And while some biologists are hard-nosed scientists most of the ones I know have a genuine affection for their study animals and I certainly have a great affection for 1MYYY, long may he remain alive and well.

Chris

20-11-2018