

Supplementary material

Living in isolation: ecological, demographic and genetic patterns in northern Australia's top marsupial predator on Koolan Island

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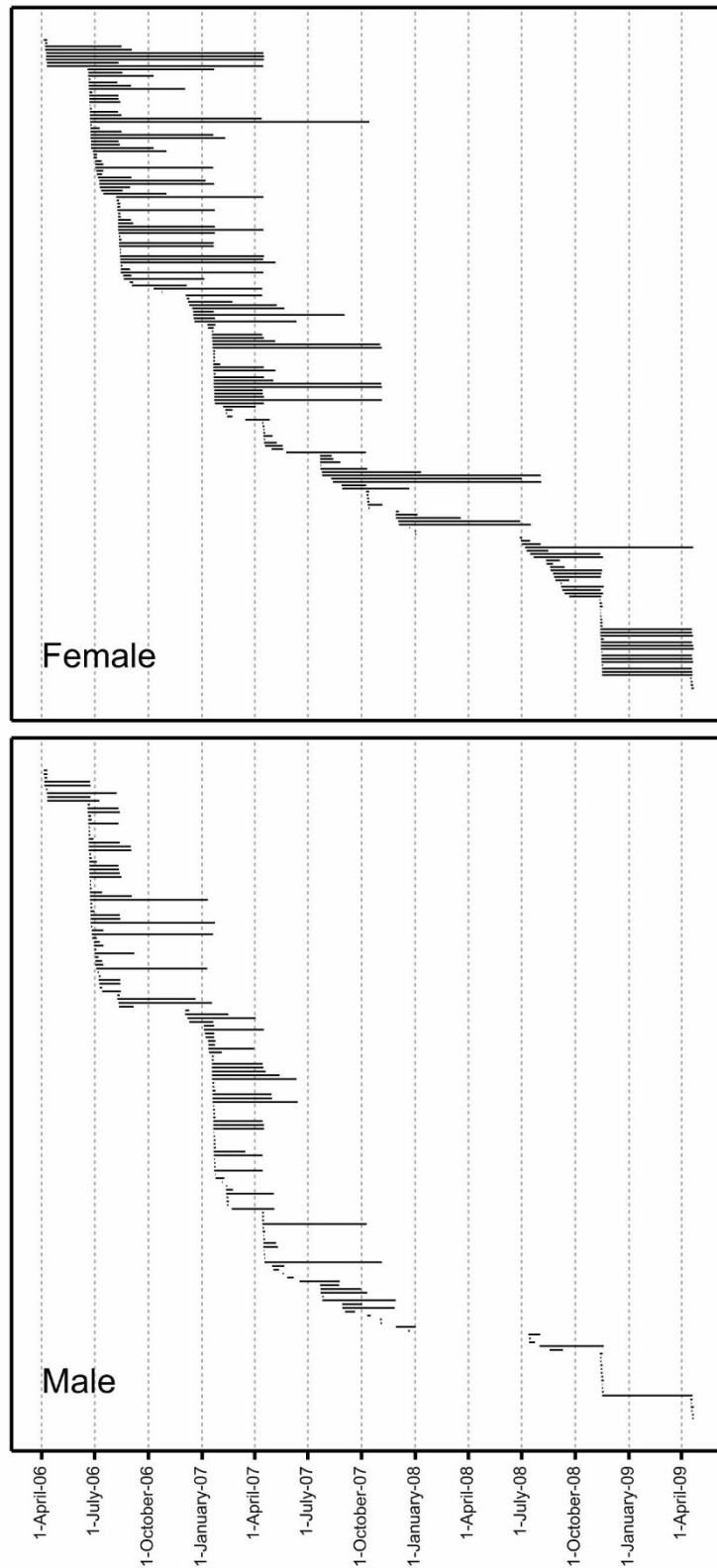


Fig S1. Duration of residency of (a) female and (b) male Northern Quolls in the trapped population on Koolan Island between April 2006 and April 2009. Each individual captured more than once is shown as a horizontal line indicating the date of the first and last capture.

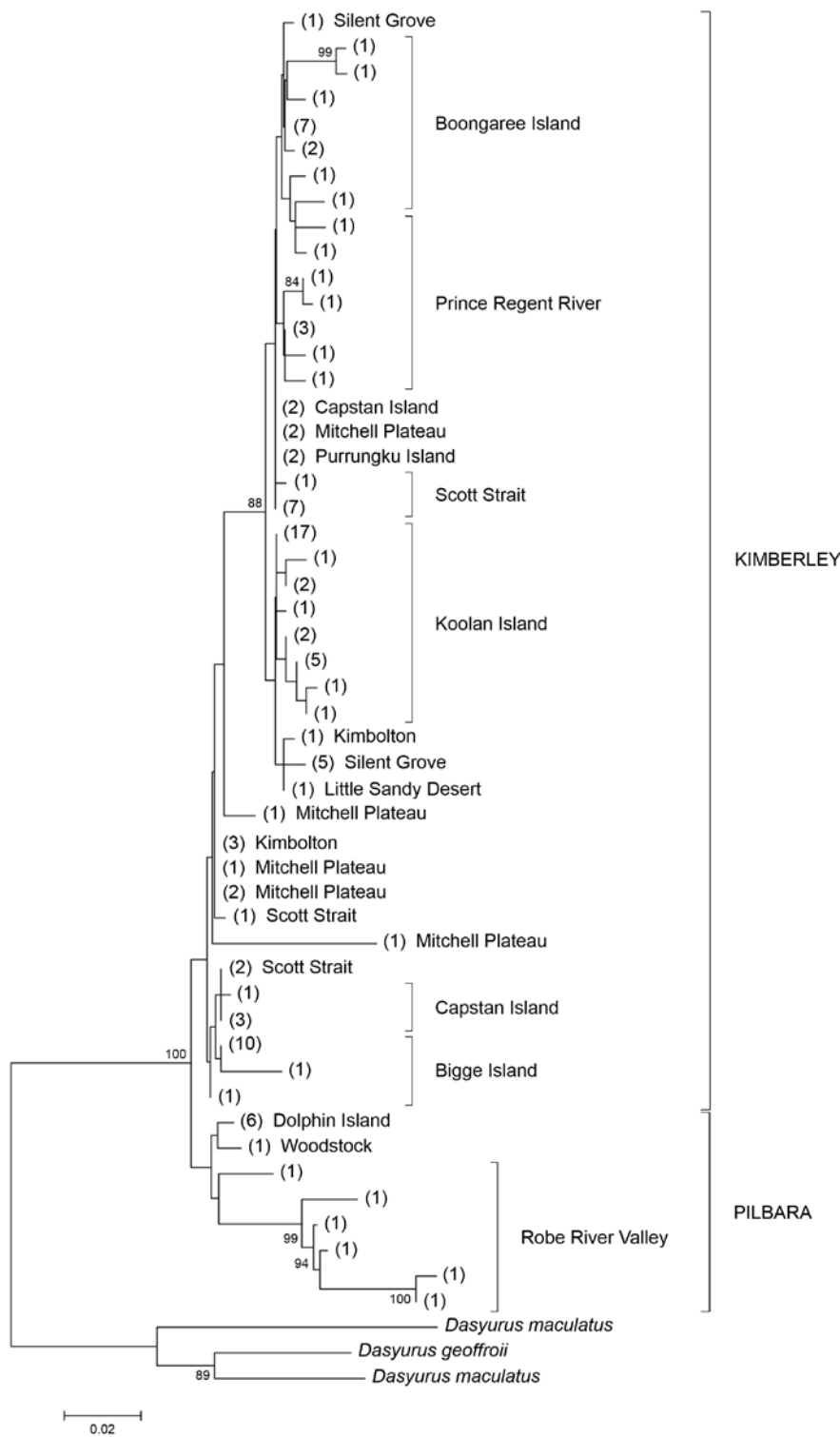


Fig. S2. A mitochondrial (mtDNA) neighbor-joining tree using the Kimura 2-parameter distance for sampled haplotypes of the northern quoll (including bootstrap values >80%). The number of individuals is shown in parenthesis. It should be noted that the individual from the Little Sandy Desert has a disputed provenance (see Woolley, P. A., Krajewski, C., & Westerman, M. (2015). Phylogenetic relationships within *Dasyurus* (Dasyuromorphia: Dasyuridae): quoll systematics based on molecular evidence and male characteristics. *Journal of Mammalogy* **96**, 37-46).

Table S1. Comparison of the extent of allelic variability for different nuclear markers

The ‘total sample’ refers to the total number of northern quolls sampled at these microsatellite markers (i.e. islands, mainland Kimberley and the Pilbara; Fig. 1)

Marker name	Number of alleles		Percentage of alleles found in:		
	detected in the Koolan Island sample	Koolan Island compared to the total sample	Kimberley mainland compared to the total sample	How <i>et al.</i> (2009) Koolan Island samples compared to the present study’s Koolan Island sample	Koolan Island compared to all Kimberley samples
3.1.2	8	62	77	50	80
3.3.1	5	29	94	120	31
3.3.2	3	20	100	100	20
4.4.2	4	29	93	75	31
pDG1A1	4	25	94	125	27
pDG1H3	7	58	83	29	70
pDG5G4	3	38	88	67	43
pDG6D5	7	30	96	29	32
pDG7F3	8	9	91	350	10
Sh3o	3	23	100	67	23
Sh6e	6	50	92	50	55
Total		33.9	91.6	96.4	38.2