Appendix 1. Additional information to support the online article is available in this appendix, including: a table with rat abundance estimates and New Zealand Fantail (*Rhipidura fuliginosa placabilis*, North Island subspecies) nest success for the Wellington sites (Table A1.1); a table showing the multimodel assessment of the influence of time-dependent factors on survival of fantail nests (Table A1.2); a figure showing the location of the study site in New Zealand, plus the locations of nests in Wellington City (Fig. A1.1); and a figure where individual fates for all nests found between 2014 and 2016 are plotted across the nesting season (Fig. A1.2).

Table A1.1. Nesting outcomes by site for fantails in Wellington City.

	2014-15			**2015-16**			
Reserve	*No. Nests*	*No. Success*	*% TT*[†]	*No. Nests*	*No. Success*	*% TT*[†]	*CCI*[‡]
Birdwood	-	-	-	6	1	0	41
Central Park	-	-	-	11	6	0	0
Johnsonville	6	6	30	2	2	15	0
Ngaio	-	-	-	4	0	30	22
Otari-Wilton's	5	4	2	2	1	5	0
Spicer's Forest	-	-	-	7	4	0	0
Trelissick	10	5	15	13	9	0	7
Tyer's Stream	4	2	30	3	0	0	7
Zealandia	-	-	-	16	10	0	0
Miscellaneous[§]	-	-	-	17	11	-	4
All Reserves	25	17	19.3	81	44	5.6	7.4

[†]*percentage of tracking tunnel line (10 tunnels at 50m spacing per line) with rat tracking at each site or the line average for sites with two lines (i.e Spicer's Forest, Johnsonville and Trelissick).*

[‡]*percentage of chew-cards (6-9 cards at 25m spacing per nest) with rat chew averaged across each site.*

[§]*combination of all nesting outcomes and chew-card results only (i.e. no tracking tunnel results available) from sites where ≤ 2 nest outcomes were gathered.*

Table A1.2. Multimodel assessment of the influence of time-dependent factors on survival of fantail nests as calculated in program Mark (n = 61). Factors include: nest phase (chick/nestling), nest age, linear time (by season day) and season stage (early, middle or late stage). All models include a constant intercept term.

constant	nest phase	nest age	linear time	season stage	K[†]	logLik[‡]	Δ[§] AICc	W_i[|]
x					1	1.00	0.00	0.36
x	x				2	0.45	1.58	0.17
x			x		2	0.38	1.95	0.14
x		x			2	0.37	1.95	0.13
x				x	2	0.24	2.88	0.09
x	x		x		3	0.18	3.50	0.06
x		x	x		3	0.14	3.96	0.05

[†]*number of parameters.*
[‡]*the maximized log-likelihood function.*
[§]*difference in AICc value for parameter relative to the top parameter.*
[|]*the AICc weight for the model in the set.*

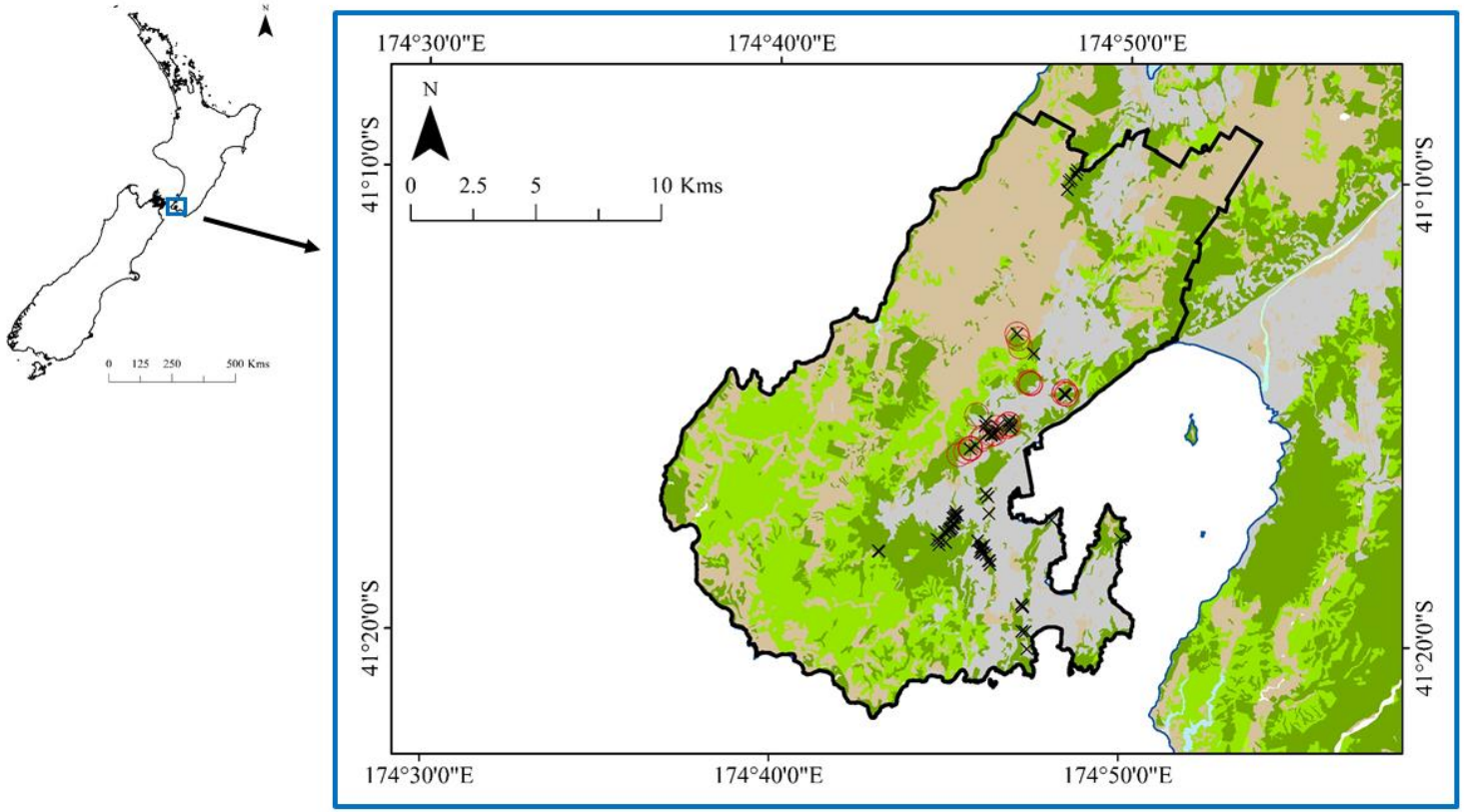

Fig. A1.1. Location of study. Left map: New Zealand showing location of Wellington City; right map: fantail nest locations for 2014-15 (red circles) and 2015-16 (black crosses). Colour key: green = forest (dark green = native / exotic mixed, light green = exotic forest); grey = buildings and roading; brown = grassland / pasture; black outline = the Wellington City Council management boundary.

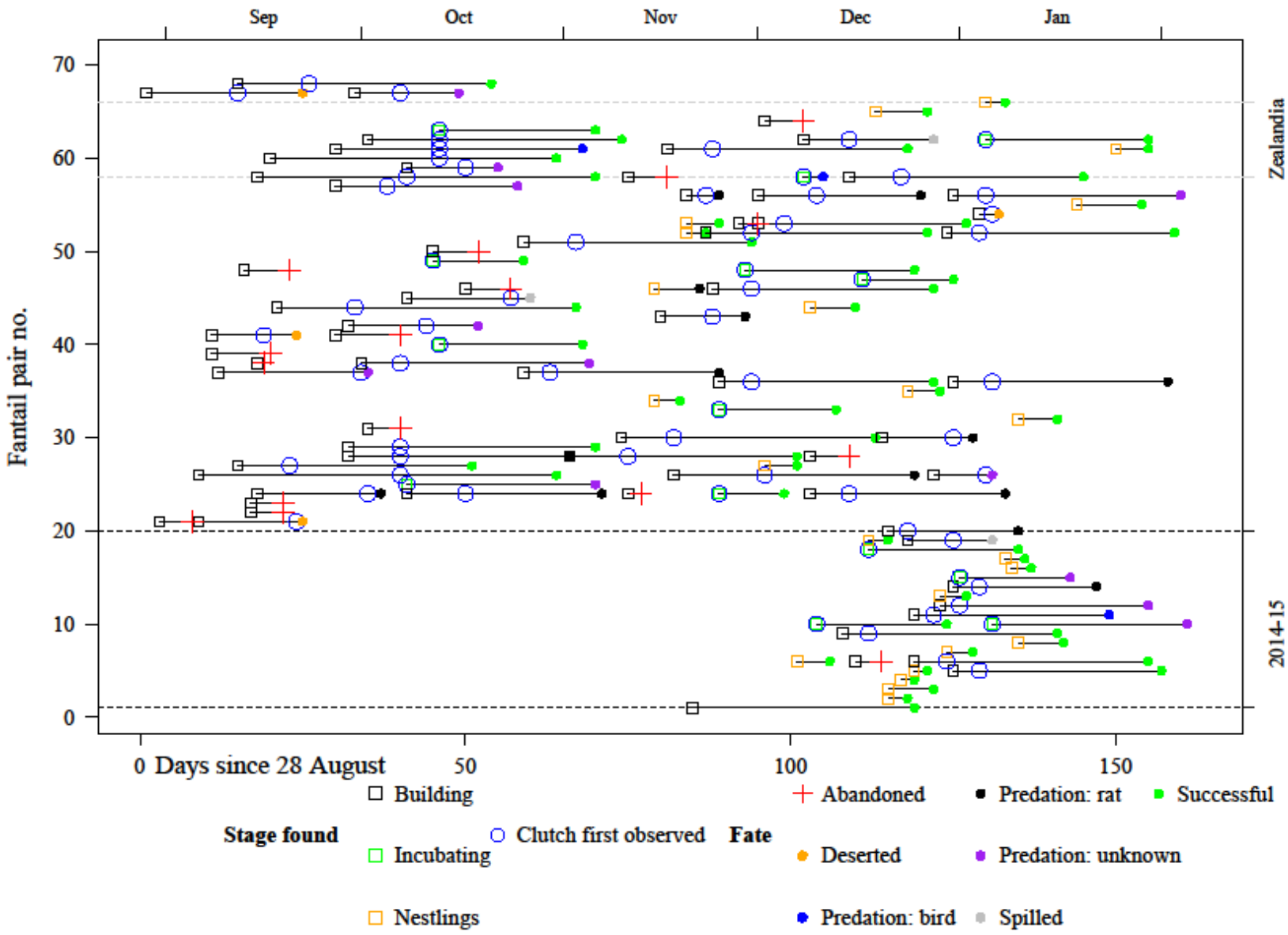
Sep
Oct
Nov
Dec
Jan
Fantail pair no.
0
10
20
30
40
50
60
70
Zealandia
2014-15
0
Days since 28 August
50
100
150
Building
Incubating
Nestlings
Clutch first observed
Stage found
Abandoned
Deserted
Predation: bird
Predation: rat
Predation: unknown
Spilled
Successful
Fate

Fig. A1.2. Individual nest fates plotted across the season for the 68 fantail breeding pairs monitored in Wellington City reserves from 2014-2016. Horizontal continuous lines spaced along a single row represent nest attempts of a pair of fantails from a single breeding season. Dashed horizontal lines delineate breeding seasons (2014-15 and 2015-16) as well as nests from the second breeding season located in Zealandia, a fenced eco-sanctuary where invasive mammals, except mice, have been removed. 'Stage found' describes the stage of the nest when first discovered advancing from Building (parents were seen constructing the nest) to Incubating (nest had eggs) to Nestlings (nest had hatched chicks). 'Clutch first observed' describes the day the nest was initially observed with eggs (i.e. this observation was not possible for nests discovered at 'Nestling' stage). 'Fate' describes the outcome of the nest.