

Appendix 1. Parameter inputs for the baseline Nightingale Reed-Warbler (*Acrocephalus hiwae*) population as modeled in Vortex.

Parameter/variable	Estimate
Scenario Settings	
# iterations	1000
# years	100
Duration of year (days)	365
Extinction definition	Only 1 sex remains
# of populations	2
Species Description	
Inbreeding Depression	
Lethal Equivalent	Default = 6.29
% due to Recessive Lethals	Default = 50%
EV Concordance of Reproduction and Survival?	yes, 0.5 between populations
Dispersal	Did not incorporate due to lack of data and high rate of island endemism
Reproductive System	
Reproductive System	monogamous within year
Age of 1 st Offspring Females	1 year
Age of 1 st Offspring Males	1 year
Max Age of Reproduction	9 years
Max Lifespan	10 years
Max # Broods/Year	2
Max # Progeny/Brood	3
Sex Ratio at birth in % Males	1:1
Density Dependent Reproduction	Yes
% Breeding at Low Density	95%
% Breeding at K	71%
Allee Parameter	0
Steepness Parameter	8
Reproductive Rates	
% Adult Females Breeding	Calculated from density dependence information
EV (SD) in % Breeding	10
Distribution of Broods each Year	0—32.47%; 1—48.41%; 2—19.1% mean = 0.866 ± 0.710
# Offspring/Female/brood (mean ± SD)	1.95 ± 0.65
Mortality Rates	
Female Mortality as %	
Mort from 0 to 1	60%

	SD in Mort from 0 to 1	10%
	Annual Mort after Age 1	38%
	SD in Mort after Age 1	3%
Male Mortality as %		
	Mort from 0 to 1	60%
	SD in Mort from 0 to 1	10%
	Annual Mort after Age 1	28%
	SD in Mort after Age 1	3%
Catastrophes	Did not incorporate as an additional parameter as survival and reproduction are calculated from data collected during a period with four super-typhoons	
Mate Monopolization		
	% Males in Breeding Pool	100%
Initial Population Size		
	Stable Age Distribution?	Yes
	Initial Population Size	Alamagan—946; Saipan—2742
Carrying Capacity		
	K	Saipan—3430; Alamagan—1180
	SD in K due to EV	Saipan—343; Alamagan—118