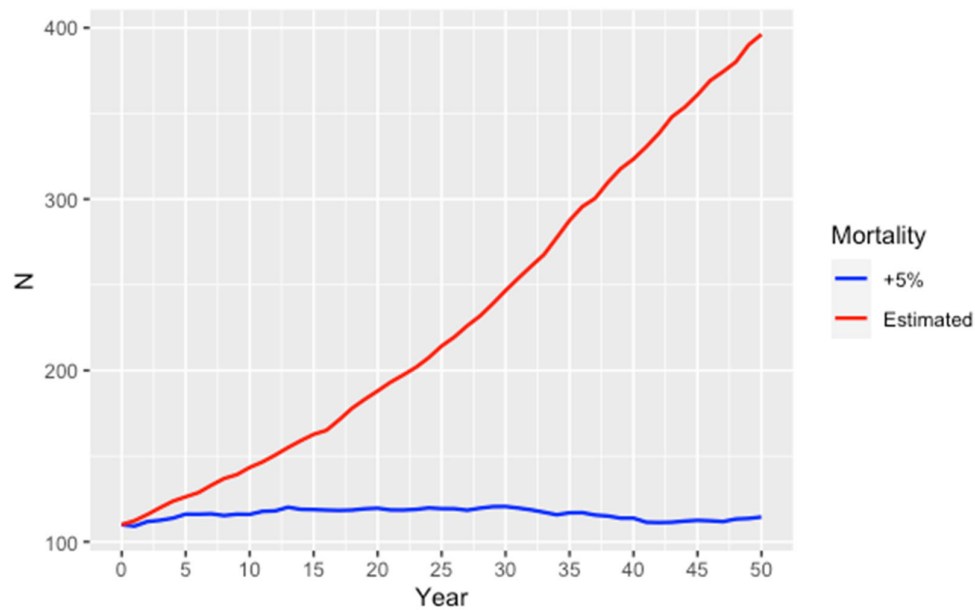
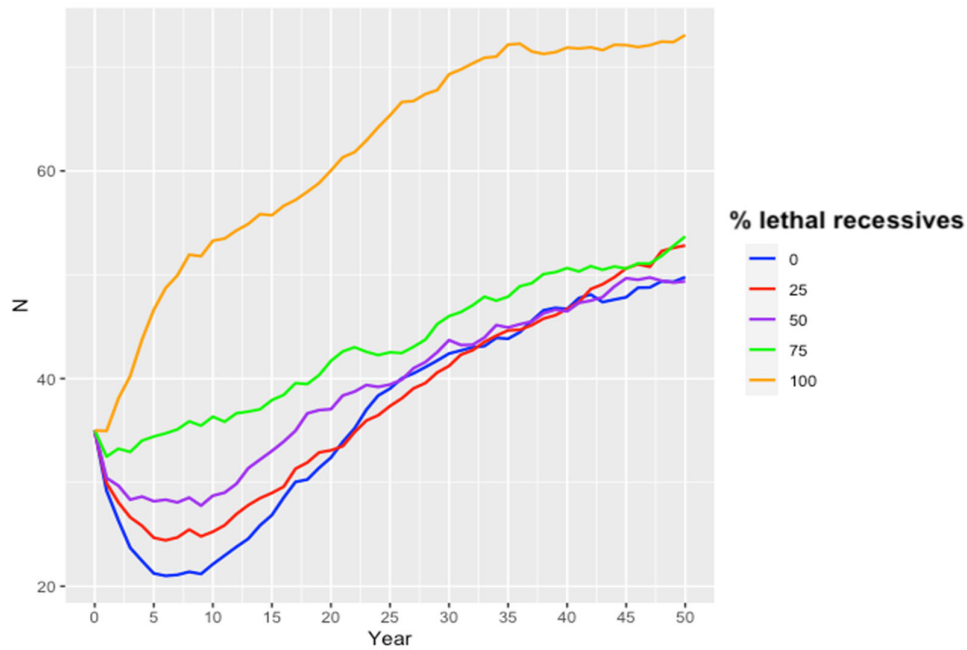


## Supplementary Information



**Figure S1.** Population growth using values of mortality at 0-1 years estimated in the 1990's and using estimated values +6% to produce a demographically stable population in the absence of inbreeding depression.



**Figure S2.** Effect of percent inbreeding depression due to lethal recessive alleles (as opposed to heterozygote advantage) on genetic rescue. Effects are shown as change in population size (N) with genetic rescue by supplementing Yellingbo founders with two highland individuals per year. Percentages of 0-75 inbreeding due to lethal recessives produced comparable changes in population size. Inbreeding depression 100% due to lethals produced much more positive population growth.

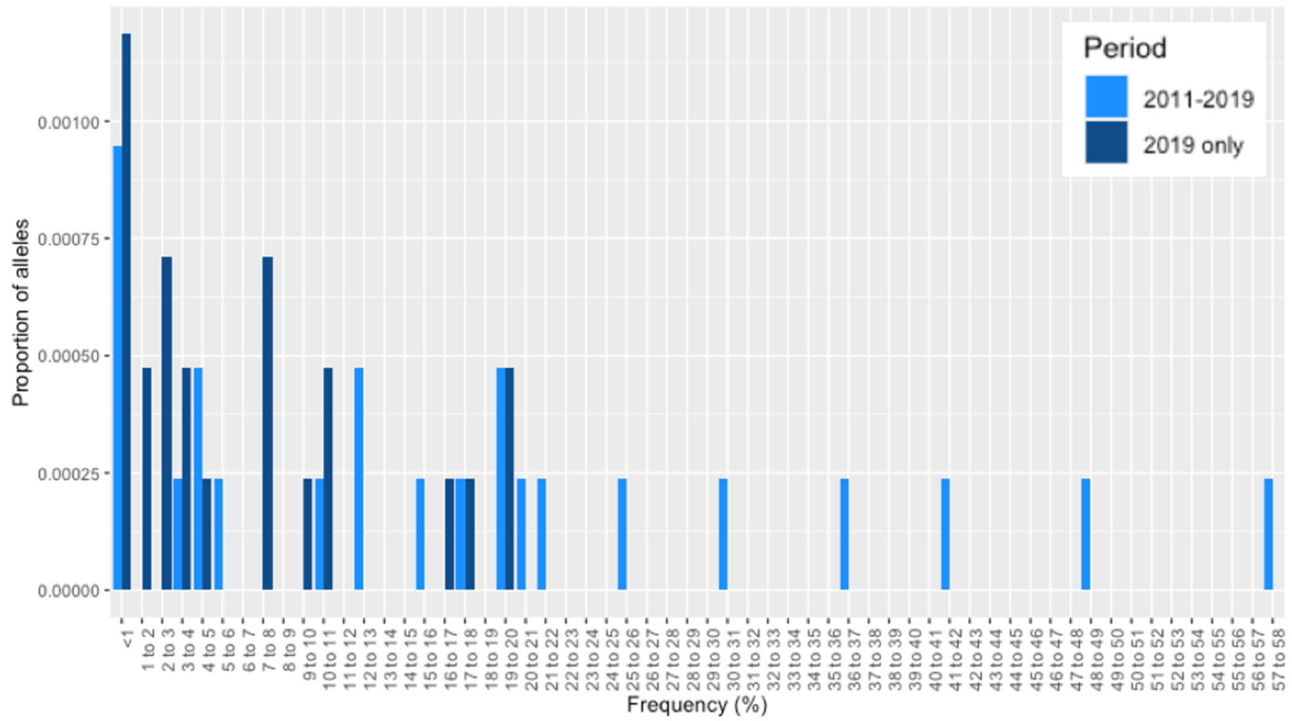


Figure S3. Frequencies of locally-unique alleles at Yellingbo from 2011-2019, and 2019 alone.

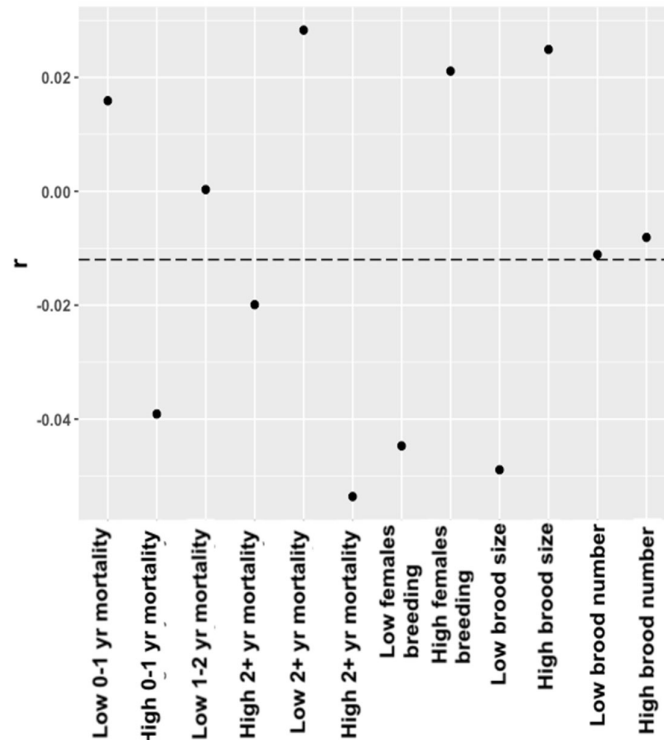


Figure S4. PVA input parameter sensitivity tests. Mean growth rate ( $r$ ) from 200 replicate runs of 50-year simulations. All scenarios began with 110 individuals, excluded inbreeding depression, and used a carrying capacity of 1,000. A baseline scenario was run using actual input parameter values (except with 0-1 yr mortality increased by 6%), which gave a stable population of approximately 110 individuals. Output values for this baseline scenario are shown by the dashed line. For each scenario shown on the x-axis, a single input parameter was either increased (Low) or increased (High) by 10% of its baseline value to determine its relative influence on simulation outcomes.