

Fijian endemic

Figure S1. SVDQuartets based species tree of Fijian *Strumigenys* inferred by using 330,288 unlinked SNPs and 19,720,001 possible quartets. Values on the nodes illustrate the proportion of bootstrap replicates that support the respective relationship.

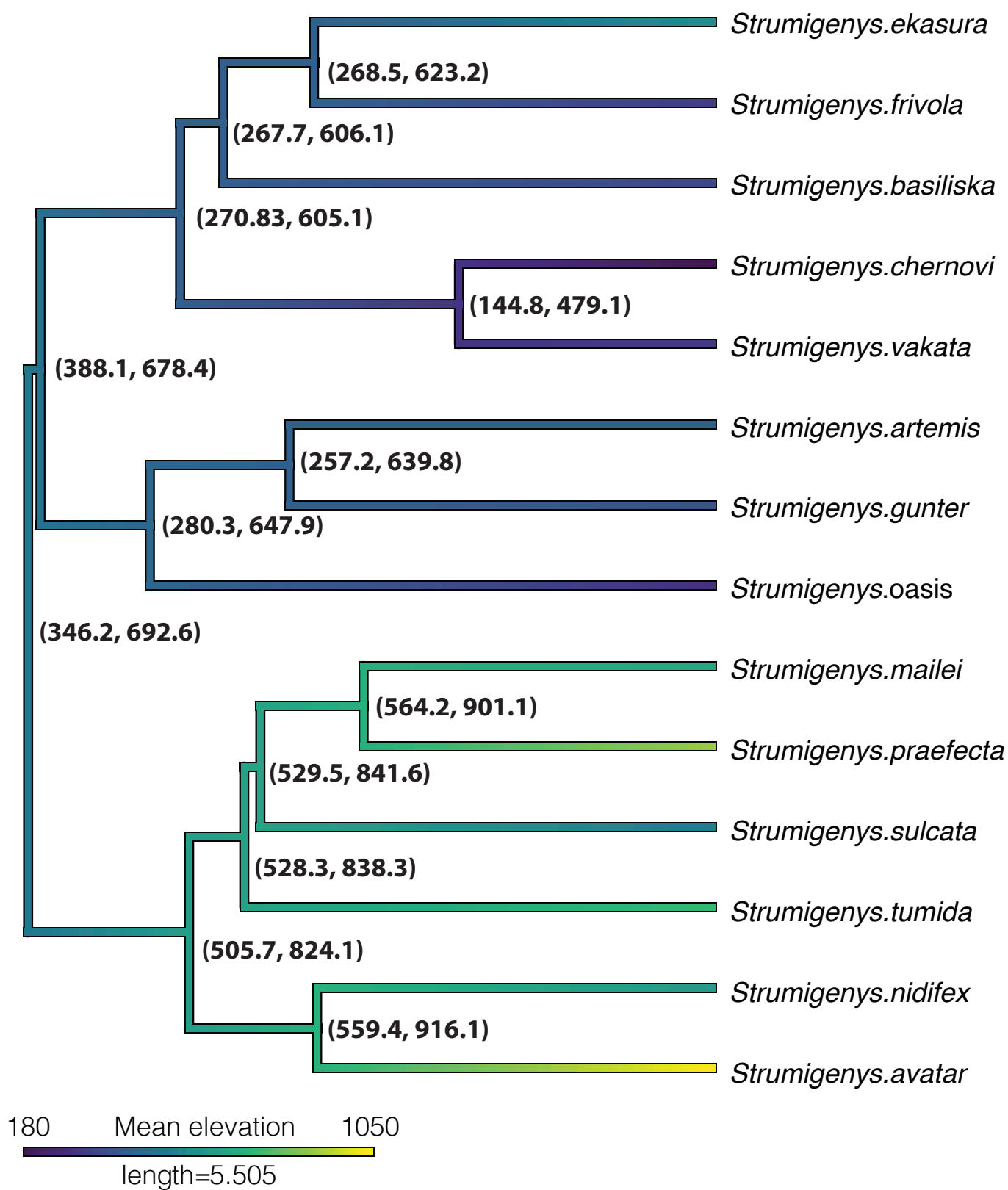


Figure S2. Ancestral state reconstruction of the mean elevation in long-mandibled *Strumigenys* species. Values in the brackets indicate the 95% confidence intervals for each node.

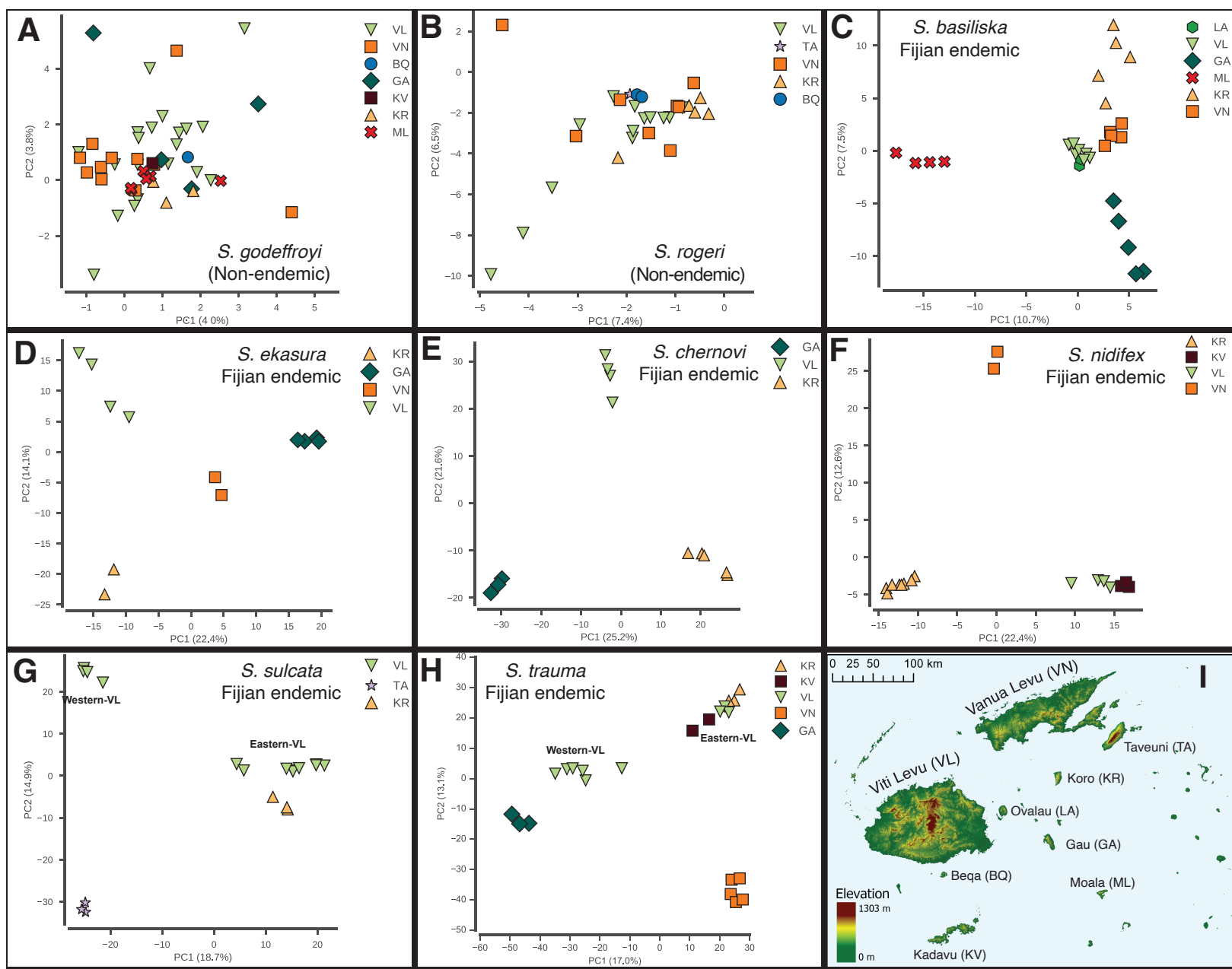


Figure S3. Principal components analyses (PCA) on SNP genotypes for eight *Strumigenys* species in Fiji to characterize genetic differentiation among different islands. No clear population structure was found in the two non-endemic species (A, B). All the endemic species exhibited clear population structures (C-H). (I) The map of the Fiji archipelago. Colors and abbreviations correspond to different islands.

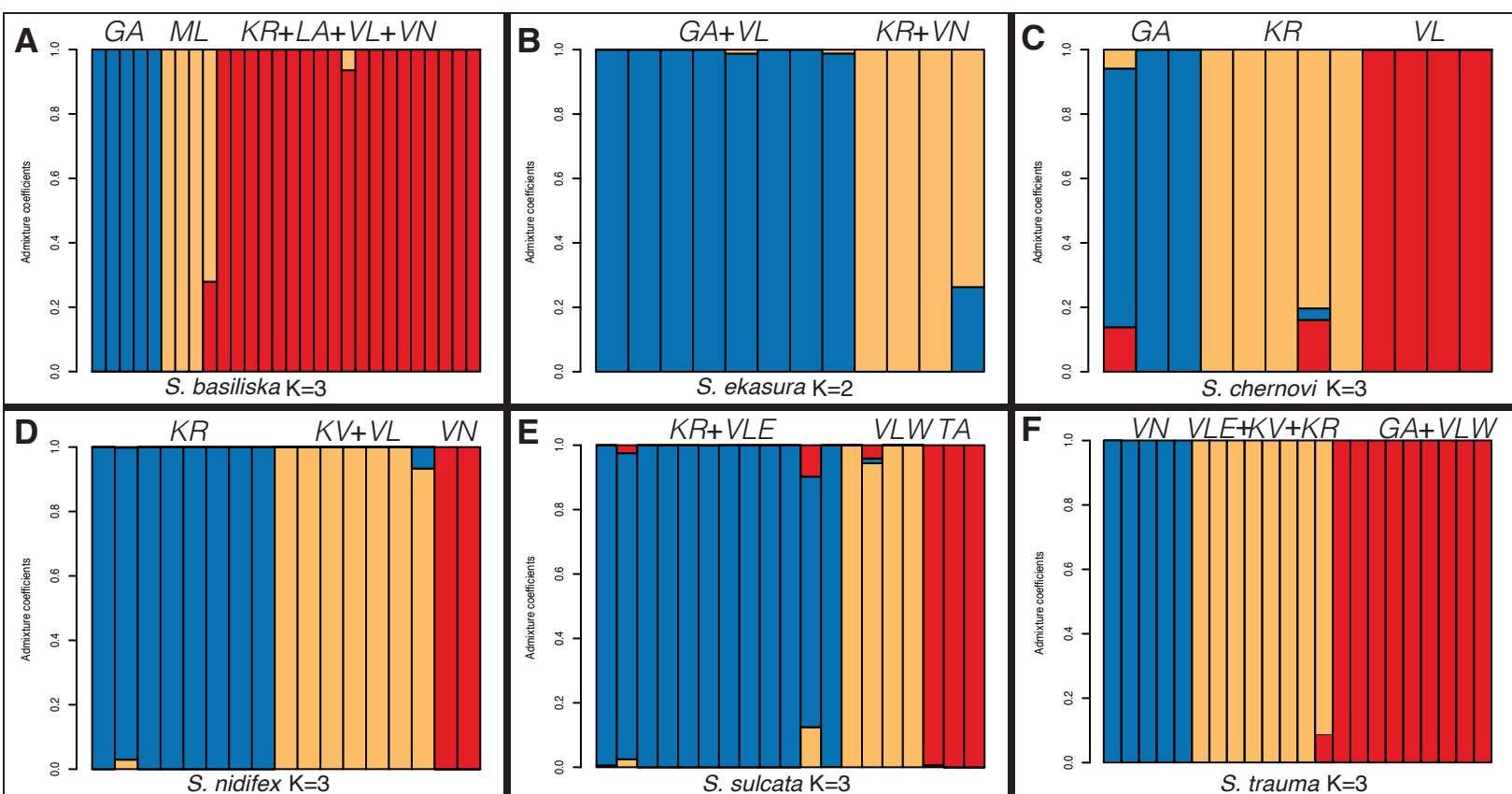
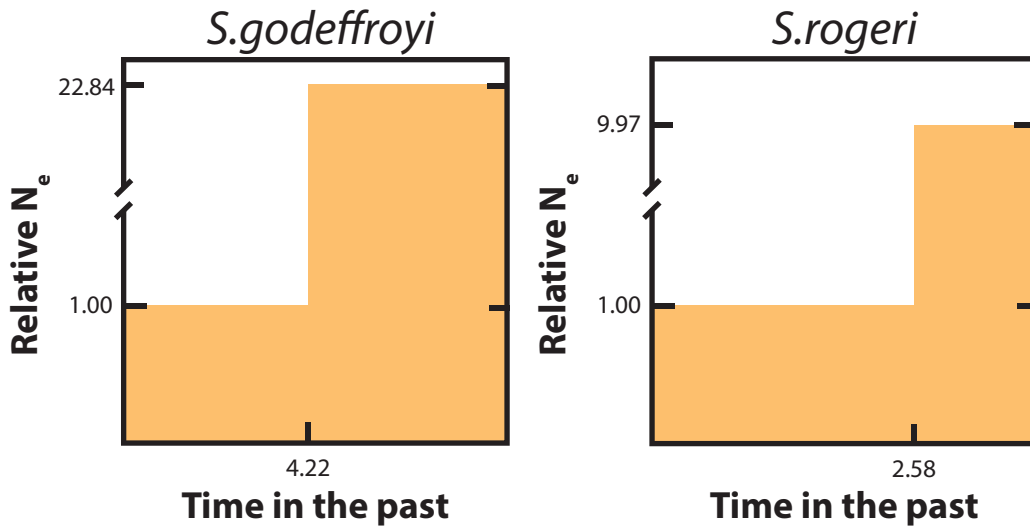
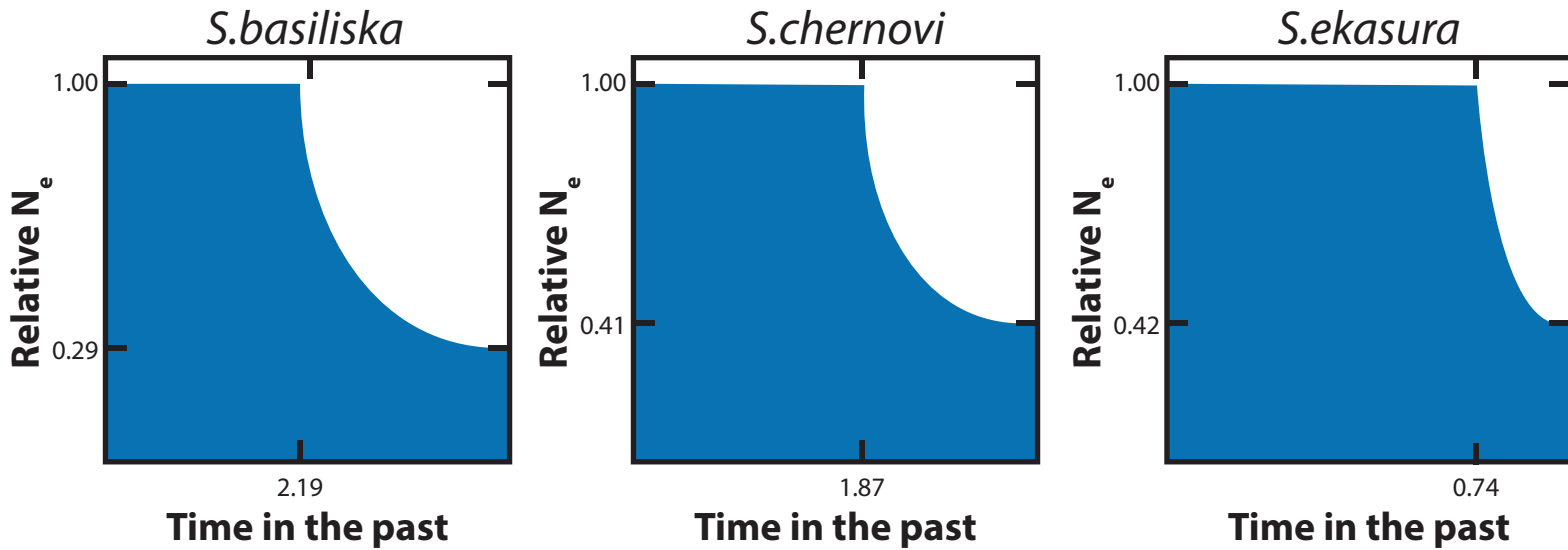


Figure S4. Estimation of population structure of eight *Strumigenys* species in Fiji based on sNMF analysis on SNP genotype data from RADseq. Each color corresponds to a distinct genetic cluster and each bar corresponds to the admixture proportion of that individual's genotype assigned to each cluster. The island abbreviations above the bar indicate where the individual came from, and the k values below the bar are the best support k values from sNMF. **(A)** *S. basiliska*; **(B)** *S. chernovi*; **(C)** *S. ekasura*; **(D)** *S. nidifex*; **(E)** *S. sulcata*; **(F)** *S. trauma*. Please note that we did not include the two non-endemic species *S. godeffroyi* and *S. rogeri* since no genetic structures were found on them (best supported k values for both species are 1).

Non-endemic species



Low-elevation endemic



High-elevation endemic

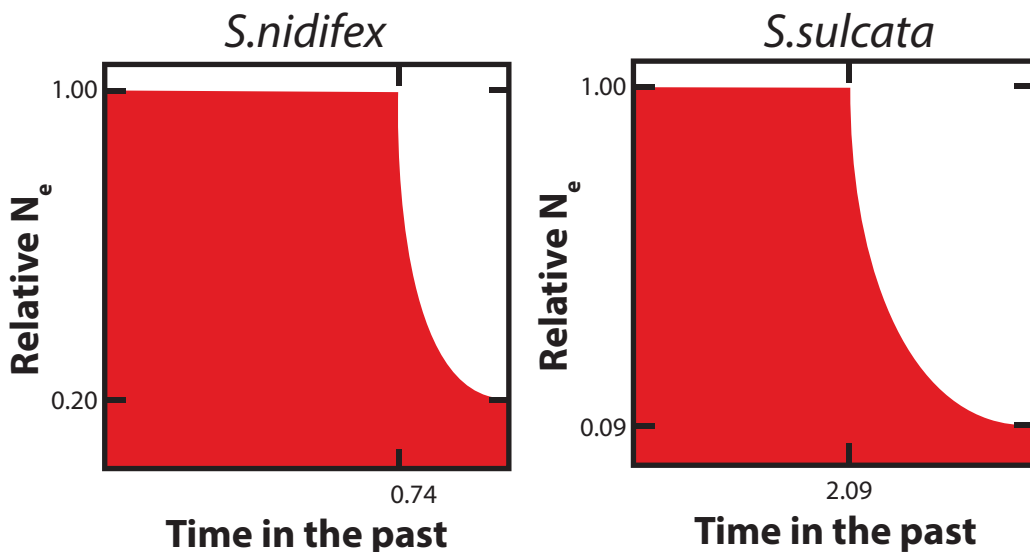


Figure S5. Inferred demographic model for eight *Strumigenys* species in Fiji. Instantaneous population expansion in the two non-endemic species, and exponential population contraction in 5 endemic species. The values are the means of all populations of that species. Time is in units of $2N_a$ generations, where N_a is the ancestral effective population size.