Juction Number Increases Over Time

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Contents

Introduction

Junctions are breakpoints between genomic segments of different ancestry.

Simulations

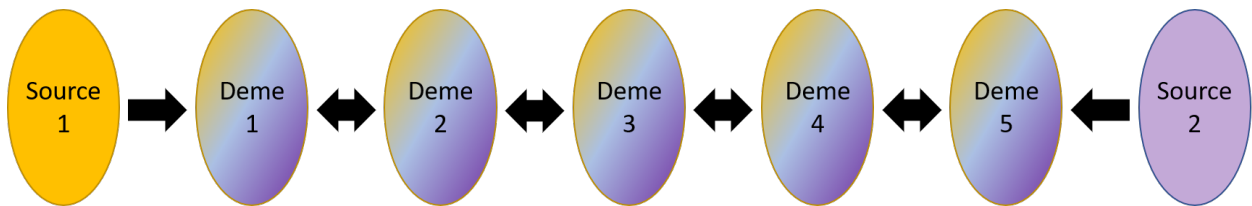We simulated junctions in a stepping stone model using `forqs` (Kessner and Novembre 2014).

Figure 1: Stepping Stone Model

Results

We find that junction number gets larger over time.

Table 1: Table 1. Mean and Standard Deviation of Junction Number across 100 Replicates.

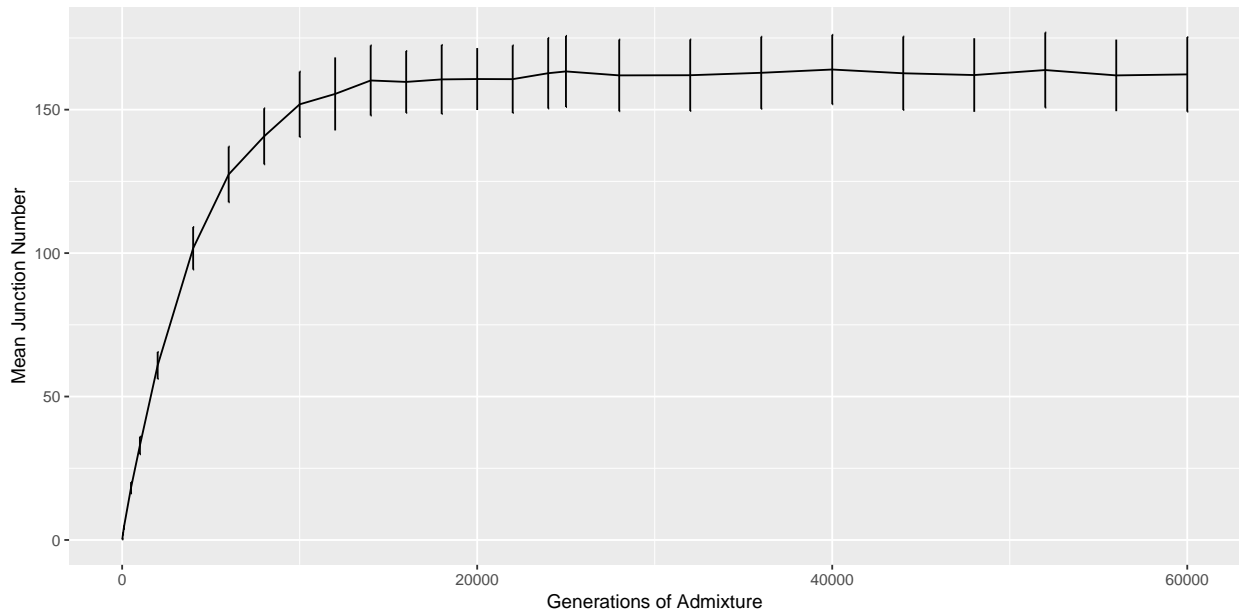| Generations	Mean Junction Number	Junction Number SD
10	0.3122222	0.1400969
50	2.2644444	0.4113007
100	4.4522222	0.6085816
500	18.2155556	1.9734217
1000	32.9450000	3.0781229
2000	60.8538889	4.7076302
4000	101.6883333	7.4338623
6000	127.4322222	9.7232357
8000	140.7216667	9.7753973
10000	151.8650000	11.4225277

Figure

Figure 2. The line shows the mean over 100 replicates and the bars show the standard deviation.

Conclusions

We find that junction number increases over time approaching an equilibrium value.

References Cited

Kessner, Darren, and John Novembre. 2014. "Forqs: Forward-in-Time Simulation of Recombination, Quantitative Traits and Selection." *Bioinformatics* 30 (4): 576–77. doi:10.1093/bioinformatics/btt712.