

Consider the Southwestern United States. Sandy colored landscape until some lava flows happen. That lava cools and now that black rock is going to be invaded by the sandy colored mice. Once every thousand years or so a black mouse is going to pop up. The owls are going to be there circling overhead for eons. And if we start with a population where just one mouse is black, and it has just a 1% advantage, watch what happens over the generations. Then in about a thousand generations 95% of the mice will be black. That's just natural selection doing the work. One mutation, one founding mutation can spread and 95% of the population in a thousand generations. Now what happens if there is a 10% advantage of being black? Very quick! In 100 generations, 95% of the mice will be black. It turns out from measurements in the wild, there's an even greater than 10% advantage of the mice being black on the black lava flows.