**Blinking light bulb analogy for Metapopulations**

What does the whole strand represent? *The metapopulation*

What does each bulb represent? *A local population*

What does the electrical wire represent? *Dispersal corridors*

What does the blinking represent? *Local extinctions*

Point: While individual bulbs are often dark, at least some of the bulbs on the strand stay lit most of the time. 🡪 Local extinction, global persistence.

One caveat: The blinking of these bulbs is not independent! Half of the strand blinks off at the same time. We would consider the bulb (i.e., the local populations) on each half of the strand to be highly correlated. Because of this correlation, the chance that the whole strand is dark (i.e., metapopulation has gone extinct), is higher. If the bulbs blinked completely independently, the whole strand would rarely be dark, since there are so many bulbs (i.e., many local populations), and the bulbs do not stay dark for long (i.e., the local populations are re-colonized quickly).