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Lecture Assignment 4

2024-09-26

1. Why might dispersing individuals have trouble accurately assessing habitat quality?

Dispersers may not be honed in on indirect cues relating to quality of the habitat over the long term or sign stimuli may not be present at the time individuals are selecting new habitats.

1. Think about NHPI in the context of a landscape with declining habitat quality. Describe how NHPI might lead to the creation of an ecological trap if habitat quality is declining. That is, if individuals select habitat conditions similar to those they were raised in, and they were raised in poor-quality habitats, could this lead to an ecological trap and why?

Yes, if an individual is raised in habitat that is declining in quality, NHPI would lead to an ecological trap if this individual chooses similar low-quality habitat that continues to decline or has declined to the point that it does not promote positive fitness.

1. Does the Mannan et al. study on Cooper's hawks in Tucson refute the idea that individuals select habitats more similar to their natal habitats? Why or why not?

Mannan et al. (2007) does not refute the idea that individual Cooper’s hawks in Tucson select first nesting habitat more similar to their natal habitat. The authors do propose that NHPI plays a limited role in this specific system, for the landscape features they examined (tree species and urban development category), but these patterns alone are not evidence against NHPI influencing nest-site selection. They discuss that selected sites reflect what was available in the landscape and that perhaps selection was not based on use of a particular tree species, but rather the use of trees themselves.