

**Week 2 activity: “Ontogenetic shift from facilitation to competition in a desert shrub”, by Dr. Maria Miriti**

**Questions**

1. In your own words, what is the “nurse effect” in plant populations? Under what abiotic (environmental) conditions do we expect nurse effects to be most important?

2. In this paper, Dr. Miriti addresses the question of whether there are ontogenetic shifts in plant-plant interactions in a desert plant. Using your own words, describe the null hypothesis and the four alternate hypotheses regarding this question.

3. In your own words, interpret the results shown in the *Top panel of Figure 2*.

4. The main takeaway from this paper is that in this species, juveniles are facilitated by conspecifics (perform best when they are close to plants of the same species), and that adults grow best when they are far way from conspecifics. **Biologically**, why do you think such a pattern could arise? Explain in terms of (a) why might juveniles benefit from neighborhoods, (b) why might adults benefit from being isolated, and (c) why this might change across time.

**Answer *one* of the following:**

5a. Listen to [this 30-minute interview](#) with Dr. Miriti. Pick one of the themes in the interview (past and ongoing research, social aspects of ecology, teaching ecology) and describe (a) Dr. Miriti's thoughts on this topic, and (b) your thoughts on this topic.

5b. Read [this recent paper](#) by Dr. Miriti about the history of ecology and race. Skim through the paper first, and then pick one sub-section of the paper to read in-depth. What subsection did you focus on, and why? What did you learn from this reading, and is there anything from this paper that you hope we explore more in class this semester?