

2008-2009 Speaker Series

“Investigating the Potential of a Dry Tropical Forest to Recover after Deforestation”



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Abstract: Seasonally dry tropical forests are the most threatened ecosystem of the tropics. Due to intense human land use, less than 1% of Latin America's tropical dry forests remain today. The majority of current dry forest vegetation exists in habitat fragments and degraded patches surrounded by cattle ranches and agricultural farms. Fortunately, there is great potential for dry forest regeneration in abandoned farmland; yet few studies have assessed the patterns of natural forest recovery over the long-term. Beginning in 1999 in Costa Rica, I set up permanent forest plots in a coastal dry forest to monitor the natural regeneration of one of the oldest secondary forests on record in the country. Through a series of descriptive and manipulative experiments, I also investigated how various environmental factors including soil composition, seed dispersal, and crab predation of seeds and seedlings impacts the recruitment of trees in the forest. I found that land crabs play an important role in coastal ecosystems by limiting seedling survivorship. My findings to date show a significant regeneration of the original forest diversity and structure, demonstrating the ability of tropical forests to recover from large-scale disturbances such as deforestation.

*** Counts as an
academic/cultural
event in gen ed.***



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