

AGRICULTURE

Relating Green Space Characteristics to Student Housing Habits

Student researcher: **Joshua Randall, Senior**

Growing psychological and sociological evidence points to humans desiring and benefiting from living and working in green spaces. University campuses offer a unique combination of both, as well as professionals in landscape and horticultural sciences. Do certain characteristics of these green spaces have an impact on the desirability of housing on campus? Using data from student housing records and publicly available arboretum data, I attempted to create a simplistic model to test this question. Diversity of species, density of canopy cover, duration of flowering time, and relative area of green space were tested against the number of students who remained in the same dorm at Purdue University for more than two semesters. Shreve, Earhart, and Harrison represented low-retention dorms; Cary and Hawkins represented high-retention dorms. Data beginning in 2008 and 2011 were used to find statistically significant groups of dorms. A generalized linear model was created; percent of green space and canopy area had the largest effect on the rate of retention. This initial step toward examining the relationship between student choice in dorms and the built environment supported the initial hypothesis that



The view south of Lilly Hall of Life Sciences. The greenhouses and parking lot decrease green space and species diversity. The area surrounding this courtyard has several new buildings but little pedestrian traffic (photo by Joshua Randall).

green spaces keep students in the same spaces longer. Green spaces offer many different features and functions to students, and in this instance seem to be included in the choice of living arrangements for students.

Research advisor David Nelson writes: “Considerable resources are invested in Purdue’s ‘green spaces’ with implied benefits for student well-being, but no empirical inquiry exists about the utility of the spaces. Joshua combines his expertise in horticulture with institutional data to examine the influence of green space in on-campus housing retention.”