

Reconciliation ecology in expanding residential landscapes: a case study from nontraditional urban extension

Residential and low-density housing areas, one of the fastest growing land use types, now covers approximately 25% of the US. Environmental impacts of residential development include habitat and biodiversity loss, and those impacts associated with the irrigation, fertilizers, and pesticides used for landscaping. Given these impacts, there is a need to design, construct, and manage residential landscapes to support native biodiversity and ecological functioning, i.e., to practice “reconciliation ecology”. Pursuing this goal requires collaboration among nontraditional Extension stakeholders involved in land development. My talk will discuss one such collaboration among UF/IFAS, land developers, landscape architects, plant producers, green industry professionals, the University of Central Florida, and the Nature Conservancy. In looking for strategies to conserve water and protect nearby lakes from fertilizer runoff, we have installed a large field experiment at the entryway of a planned 29,000-home development. The experiment aims to identify irrigation and soil remediation strategies to establish drought tolerant native plants. It also doubles as an attractive landscaped feature, providing opportunity for outreach/education about the environmental benefits of native landscaping. Many important impacts have emerged from this collaboration, including buy-in on the importance of science for meeting sustainability goals, as evidenced by the land developer funding a graduate student. The collaboration also resulted in the design of native, drought-tolerant landscaping for 12 model homes. Once installed, these model homes will demonstrate the attractiveness, feasibility, and environmental benefits of drought-tolerant native landscaping, inform landscaping designs in this and future development projects, and provide long-term outreach and research opportunities.

Basil Iannone

Dr. Basil Iannone uses his background in plant ecology, ecological restoration, plant invasions, and spatial analysis to inform the design construction and management of urban and residential landscapes that support greater levels of native biodiversity and ecological functioning. The ecosystems in which he works includes stormwater ponds, lawns, ornamental gardens, residential yards, and master planned communities. Understanding the ecology and management of these designed/constructed ecosystems requires interdisciplinary thinking. For that reason, Dr. Iannone works with a diversity of researchers and state extension specialists, including plant ecologists, soil scientists, entomologists, biogeochemists, wildlife ecologists, landscape architects, horticultural scientists, turfgrass experts, social scientists, engineers, and economists. The stakeholders with whom Dr. Iannone works include those interested in the benefits of native landscaping, and those involved in land development, including developers, planners, landscape architects, plant nurseries, and green industry professionals.

