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The LILLY ARBOR Project: An Experiment in Urban Riparian Restoration

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The Lilly ARBOR Project is an experimental riparian restoration project along the White River in downtown Indianapolis, IN. The site was created to be both a research and education site a) for long-term study of floodplain and riparian restoration strategies, b) to evaluate restoration procedures currently utilized by restoration managers, and c) to monitor the long-term growth and development of an urban riparian forest and its function.

The site is undergoing ecological restoration through the reforestation of 8 acres of the riparian corridor along a 1 km river reach utilizing 12 species of native trees. This ecological reforestation project completes a key component of a conservation corridor through Marion County, Indiana.

The experiment in riparian restoration is designed to test the relative success of three different reforestation strategies: a) containerized stock; b) bare root whips; and c) bare root whips with some weed control strategies. 1330 trees have been planted with 2 acres planted in each style. 2 additional acres were not planted and serve as control plots. After 1 year of growth, there is no statistical difference in tree survival based on planting style. Important differences in survivorship are apparent between different species with Black Willow, Cottonwood, Sycamore, and Ohio Buckeye suffering significantly higher mortality than all other trees regardless of planting style. Species specific differences in growth rate are evident for all three planting styles.

Monitoring is ongoing for ecosystem function including population and site usage studies for reptiles, amphibians, butterflies, dragonflies, and birds. Vegetation monitoring includes seed bank studies, the relationship between native and exotic herbaceous vegetation, and natural recruitment, among others. October 2002 will mark the second year of growth and monitoring at the site and will provide important comparative data.

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