

# Land Lab Competition Proposal Overview: Native Species Living Lab

Submitted by Tower Grove South Neighbor Partners

## Background

Prior to the publication of Douglas Tallamy's book, **Bringing Nature Home: How You Can Sustain Wildlife with Native Plants (Timber Press, rev. 2009)**, biologists, horticulturists, and home gardeners simply *believed* that gardening with native plants was superior to other approaches. However, the systematic research done by Tallamy and his University of Delaware graduate students has provided what many consider the first scientific evidence that exotics do not sustain regional or even migrating wildlife, including insects, frogs, toads, bats, and birds. Their studies documented the number of species supported by specific trees, shrubs and other native plants in 'vacant' suburban landscapes; over a short three-year period, the species sustained by the new plantings increased from under twenty to several hundred.

## Project Summary

The city of St. Louis is located on two important migration routes: the Mississippi flyway and the Monarch butterfly migration path. It is well known that the numbers of birds and insects using these routes are shrinking because of habitat loss, invasive species and climate stress. Our team proposes to create a **Native Species Living Lab** on Lot #5 at 1300-1306 Montgomery Street that uses Douglas Tallamy's seminal research as a foundation. This Living Lab will demonstrate how modest, but sustained, changes can transform an under-developed urban landscape into a biologically rich and diverse environment in just a few years. Such a transformation has the potential to affect the aesthetic, educational and healthful life of nearby neighbors. If replicated in many contiguous vacant lots within the city, this concept could result in a **visionary new habitat corridor** that links existing parks, nature reserves and Confluence Greenway sites across urban St. Louis. It could become a new attraction for residents and visitors.

Our plan includes the following elements:

- Property clean-up using volunteers and donated services
- Pedestrian-friendly design, including shade, grassy walkways and seating
- Life-cycle plantings
  - Native trees known to support large numbers of species (oak, river birch, willow, hickory)
  - Native shrubs that provide nesting, food and shelter for birds and amphibia
  - Native host and nectar plants that provide nesting and food for insects
- Rain capture and runoff reduction
- Lifelong Learning and Research
  - Learning and citizen science activities that will engage neighbors, students and the community
  - On-going scientific tracking of species growth and diversity

Besides habitat creation, we envision offering unique opportunities for lifelong learning through signage, online and hands-on learning spaces, and an engaging citizen science program. The citizen science program, led by volunteer grad students and scientists, will enable neighbors and visitors to participate in tracking plant growth and species diversity over the project period. We hope to add technologies (sensors, cameras) that will allow remote educational activities similar to those offered by the Raptor Resource Project in Iowa.

Transforming 1300-1306 Montgomery Street into a Native Plant Living Lab will provide many benefits to Old North and the greater community. First, by taking advantage of seed availability, propagation and drought-resistant qualities of native plants, the cost of maintaining the plot will be modest. Second, the healthy range of native plants will make the garden a magnet for native and visiting wildlife, in particular birds and butterflies. Third, the Living Lab will enhance the nearby community garden. Finally, beyond the benefits cited above, our proposal offers an attractive replacement for the current condition of the corner property.

We see this project serving as a pilot for expansion of the model. We are confident that conducting systematic studies on the feasibility of a Native Species Living Lab corridor will show long-term beneficial impact on human health, reduction of the urban heat effect, mitigation of some global climate change effects and increases in species at risk from habitat loss. Even more, our proposed project will show that, with a modest budget, a committed neighborhood group can bring new strategies for a sustainable St. Louis to life.

### **Initial Project Team**

The Tower Grove South Neighbor Partners are a group of community conscious TGS residents. We are not directly affiliated with a large institution in St. Louis. However, we represent various areas of expertise, established connections to large networks (urban farmers, community activists, master gardeners), and longstanding partnerships with local institutions. Through these networks, we have access to volunteers, specialists and in-kind donors. We have identified individuals or groups with specialized knowledge who can serve as advisors; in most cases, we already have a working relationship with these potential advisors.

### **Project Contact**

- Christine Roman, Ph.D., Museum Media and Exhibition Specialist  
Dr. Roman has over 30 years experience in educational research, project planning and management, exhibition design and development, and large collaborations. She has overseen numerous large NSF-funded partnerships such as the \$1.2 M Mississippi RiverWeb Museum Consortium; she led the St. Louis-wide FIRST Robotics initiative for the Science Center for 10 years.
- Marsha Mathews, retired University of California Administrative Specialist  
20 years experience in project coordination for research and non-profit organizations; International Studies background; volunteer service - US Peace Corps and community organizations
- Brian Douglass, AmeriCorps, Rebuilding Together  
Prior to his term as AmeriCorps project manager with Rebuilding Together, Brian studied urban economics and urban planning at Tennessee Tech University and Florida State and brings with him expertise in volunteer recruitment and management, project management, and garden design and maintenance.
- Tower Grove South Horticulture Group  
Comprised of master gardeners, horticultural specialists and TGS gardeners, this group is 10 years old. Individual members of the group have committed to assist in plant selection, soil preparation and planting.

### **Proposed Advisors**

Professor Douglas W. Tallamy  
Audubon Center, Riverlands  
Shaw Nature Reserve  
Butterfly House  
Saint Louis Zoo Entomology Department  
St. Louis Master Gardeners

Horticultural Co-op of St. Louis  
Litzinger Road Ecology Center  
Learning Games Network  
Cornell Ornithological Laboratory  
Anne Lehman, Dirty Girl Farms