Ecology Lab                                                    3-24-2010
Biology 229                                                    Prof. Kerkhoff

**BFEC – Restoration Ecology**

Today, we will be working on a *restoration ecology* project in one of the pastures that belongs to the BFEC. Most generally, restoration ecology is concerned with renewing degraded, damaged, or destroyed ecosystems. It is an active, applied form of ecology that has important interfaces with natural resource management, landscape architecture, and civil engineering.

As part of the US Fish and Wildlife Service "Partners for Wildlife" program, BFEC Facilities Manager Dave Heithaus has been restoring a streamside area of the pasture. The restoration efforts are focused on limiting cattle access to the stream, removing an exotic shrub species (Chinese privet, *Ligustrum sinense*), and planting native riparian trees (including black walnut, *Juglans nigra;* shagbark hickory, *Carya ovata;* swamp white oak, *Quercus bicolor;* black oak, *Quercus vellutina;* and sycamore, *Platanus occidentalis*). The goals include invasive species removal, native species establishment, slope stabilization and erosional control, reduced nutrient loading to the stream, and the establishment of wildlife habitat. Altogether, this project covers approximately 3.3 hectares (recall that a hectare (ha) is 100 x 100 m.

See the map on the back for an idea of the landscape context for our work. We will be working in the easternmost, unplanted area.

We will meet at the Miller Observatory and transport our seedlings and tools out the restoration site. Dave Heithaus will get us oriented on the field methodologies and then we'll get to work. We'll quit early enough to get the materials cleaned up and get everyone back to campus by 4 pm.

**Your assignment:** Here, as with all our time in the field, I want you to be making ecologically relevant observations. Note them briefly in your notebook (or describe them to your work partner) then reflect on them at more length when you settle down to write in your lab notebook. Keep in mind the purpose of this work in your reflections and include your data on trees planted or shrubs removed, as well as other ecological observations related to the project. Finally, don't forget to augment your species list while we are out there.

New Gambier Road

New Gambier Loop

BFEC North

Wolf Run

Route 308

Private Land

Private Land

Miller Observatory

Corridor Trail

Route 229

Miller Observatory Driveway

Kokosing Gap Trail

Bishop's Backbone Loop

Kokosing River

Gambier

Miller Observatory Trail

Brooklyn Street

Wiggin Street

BFEC South

BFEC Attractions Trails

Laymon Road

River Trail

BFEC Farmhouse and Butterfly Gardens

BFEC Visitors' Center

Porter Road

Private Land

N
W   E
S

0   0.125  0.25 Miles

P Parking    ? Information

Unplanted

Planted

Planted; then grazed

Unplnated; plant upslope

Unplanted