BIOL 324

Lab L Input **11/21/23**

I. Prep

A. Prep. savanna/woodland .pptx to flash

B. Set up KB with laptop & pptx. & laser pointer

C. Edwards wetland photos

D. Flag Edwards Woodland trees

E. Saw equipment and gloves for Edwards Woodland girdling

II. Orientation in Gathering Room - savanna/woodland.pptx

III. Field (thru S. Gate)

A. Indicator of remnant oak woodland plants in closed-canopied forest (behind LL pavilion)

1. due to native soils and hydrology

B. Process of restoring oak woodland (Luckey Woodland)

1. Understory removal stages (cut and treat stumps)

a) hand loppers

b) chainsaw

2. Selecting overstory trees to remove by girdling

1st… non-hard mast producing species (Black Cherry & Sugar Maple)

2nd…… hickory species

3rd….oak species to get to 30-80% canopy cover (densiometer)

a) woodland: < 70 tpa = 25 ft spacing

3. Reintroduce fire (burned 4/18…. planned for spring 2024)

(look at tip-up with sandy soil)

C. Savanna (S. Sand Hill) (grazing history)

1. IEP removal

2. Thinning to 5-30% canopy cover of oak (black oak due to soils)

    a) savanna: < 40 tpa = 35 ft spacing

3. Monitoring

    a) native species establishment

        - Indian grass

        - big bluestem

4. Reintroduce fire (burned 4/18…. planned for spring 2024)

(park along access road along Edwards Woodland)

D. Edwards Woodland Project

1. removal of understory trees

2. sprayed woody ground cover species

3. flagged “remove” mid-story trees

    a) girdle/treat example trees

4. Use densiometer to select overstory trees to girdle

(drive thru north gate and park along send of 525W)

E. Show time-lapse photos of Edwards wetland restoration

The most effective strategies for restoring savanna ecosystems include:

- Prescribed burns
- Mechanical and hand removal of invasive plants
- Use of herbicides
- Establishment of native plants
- Monitoring of the site