Tree Core Prep and Analysis

We have dried and glued your tree cores to a mounting board to save time.

Step 1
Look at the example mounted cores that we have to get an idea of what you are trying to accomplish. Wrap a strip of 150 grit sandpaper around a pink school eraser. Gently run the sandpaper down the length of the core. We want a flat surface that we will observe through a microscope, so we will want it to be as smooth as possible. Once you have a flat surface, switch to 220 grit to smooth it. Then switch to 320 grit and finally to 400.

Step 2
Label the bottom of your mounting board with a Sharpie permanent marker. Include the following information: Latitude, Longitude, Date Collected (MM/DD/YYYY), Species Name, and Lory State Park.

Step 3
Let's learn the elements of a tree ring. Laurie will talk about this.

Step 4
We are going to start by simply counting the rings.

If your tree was alive at the time of coring, start at the bark end of the core.

1. Use the T-Pin to poke a single tiny hole on the following years: 2010, 2000, 1990, 1980, 1970, 1960, 1950, etc.
2. Add a second hole on every half-century ring. (1950, 1850, etc)
3. Put three holes on every century ring. (2000, 1900, etc)

If your tree was dead at the time of coring, start at the center of the tree.

1. Use the mechanical pencil to mark the first ring and then every tenth ring with a single dot.
2. Put double dots every 50^{th} ring.
3. Put triple dots every 100^{th} ring.

Step 5
Next, we are going to make a "skeleton plot" on a strip of graph paper.

Skeleton Plot Guidelines:
1. Each vertical line on the graph paper represents one ring.
2. You do not have to draw lines for every ring.
3. The narrower the ring, the longer the line you draw.
4. Line can be a maximum of 10 little squares long on the graph paper. This would represent the narrowest rings.
5. The length of the line you draw for a ring is derived by comparing its width to the widths of the three rings on either side of the ring in question. (remember: draw a longer line if the ring is smaller than the neighboring three rings on each side. The actual length depends on the relative proportions of the ring widths).

Step 6
1. Compare your skeleton plots with the plots that the other groups made. Are they similar or different? Why?
2. Compare your skeleton plots with the master chronology for the region. Now you should be able to put actual calendar years on each ten years of your dead tree skeleton plot.

Step 7
Write up any information you have gleaned from your cores. Include your own interpretation and any information you have learned from Laurie Huckaby.

Measuring ring widths
Use the Brock microscope and the steel ruler for these measurements. You should be able to get accuracy to a quarter of a millimeter (0.25 mm).

Plot the ring widths on a separate strip of graph paper.