Leaf punch sampling protocol.

Supplies needed:

* Micronic tube rack w/ bead filled tubes
* Data sheet with barcoded tubes matched to tree ID
* Leaf punch
* sharpie
* Liquid N2 collection dewar
* Liquid N2 reserve dewar
* SPAD meter
* Metal object to force leaf into tube.

For sterilization:

* Chem wipes
* EtOH spray

Procedure:

* Identify a lateral branch or the top of the tree approximately 6-10 feet high.
* Identify the first mature leaf whose petiole is attached on the South side of the tree/lateral branch (leaf will range from 7 to 15 leaves down from the apical bud of tree/lateral branch. It should be healthy and representative of mature leaves found elsewhere on tree (i.e. not dramatically different in size, color or hairiness))
* Take four leaf punches on leaf.
  + Spread punches out evenly so that on each half (split bilaterally) of the leaf one punch is towards the base and another punch is nearer to the apex of the leaf.
  + For each punch, place appropriate tube below punch so that leaf section falls into tube. Otherwise use sterilized object to gently push leaf into tube.
* Close tube and place in collection dewar.
* Use EtOH and chem-wipes to clean leaf punch and pusher object.
* Measure SPAD on leaf and record on margin of datasheet.