

A vertical decorative bar on the left side of the slide, featuring several overlapping circles in shades of brown and tan. The largest circle is at the top, with smaller ones below it, creating a cascading effect.

FORESTRY

Teacher Training Day for Envirothon
Grand Island, January 11, 2017



Nebraska
Forest
Service

UNIVERSITY OF
Nebraska
Lincoln



TOPICS TO STUDY

- What is forestry in Nebraska?
- Forests and their trees
 - Pine Ridge
 - Riparian forests
 - Windbreaks
- Managing forests, understand & measure!
- Tree Identification : Using the key to identify:
 - Habitat, form, bark, bud, twig, leaves, flower, and fruit
- Tools to measure



WHAT IS FORESTRY IN NEBRASKA?



FORESTS AND THEIR TREES

- Where are Nebraska's significant forests?
 - Ponderosa pine forests
 - Hardwood forests
 - Riparian forests



FORESTS AND THEIR TREES

- Trees in Nebraska's forests
 - Pine
 - Oak and walnut
 - Cottonwood
 - Eastern redcedar



MANAGING FORESTS

- Sustainable use and the importance of it
- Silvicultural practices
- Forest thinning
- Fire suppression - fuel loading and fuel reduction
- Prescribed fire
- Forest inventory measurements
- Plant species identification
- Insect and disease identification



TREE IDENTIFICATION

- Each tree species has unique characteristics, which often determines the practical use of the species. Some are conifers (or softwoods), others are deciduous (or hardwoods).
- It is important to be able to accurately identify the common tree species in Nebraska.
- Become familiar with identification terminology using a dichotomous key to identify tree species.



5 FEATURES OF TREE IDENTIFICATION

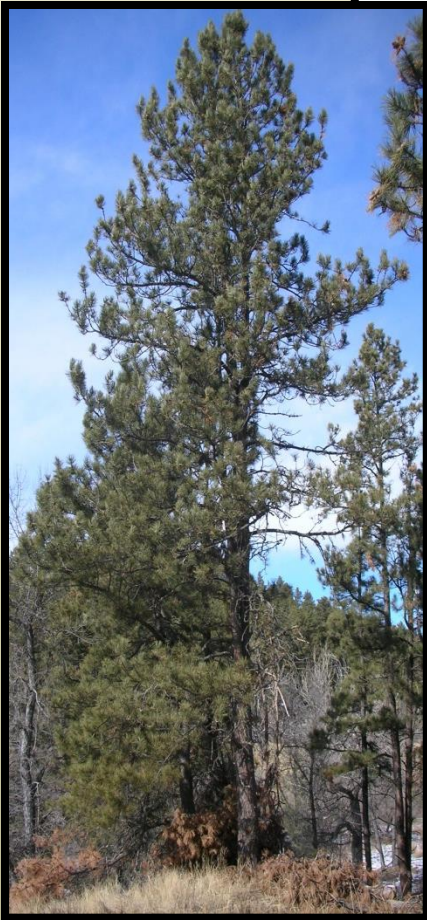
- Habitat
- Form
- Bark
- Bud, Twig
- Leaves, Flowers, and Fruit



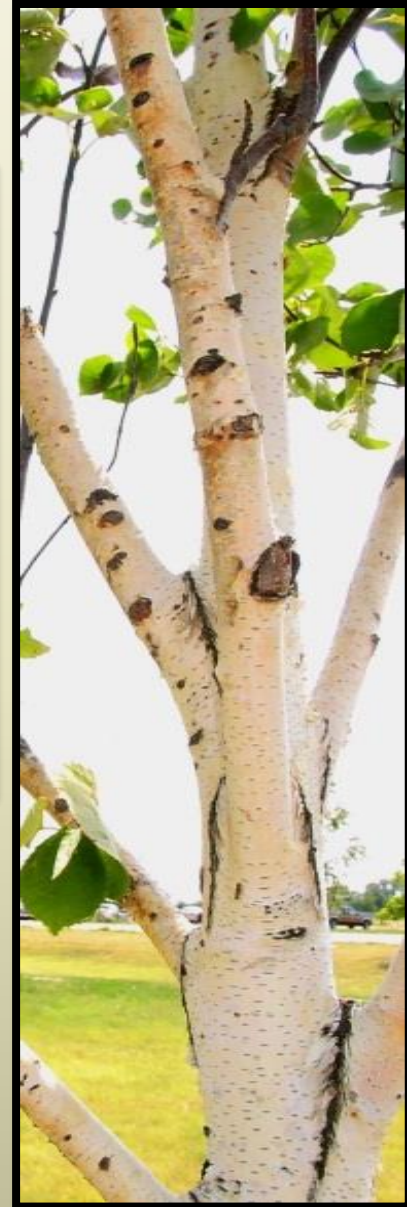
HABITAT



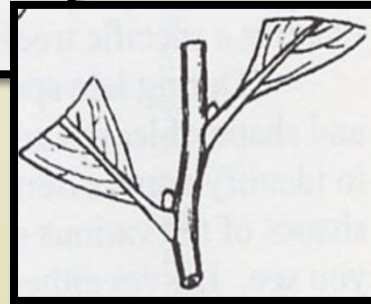
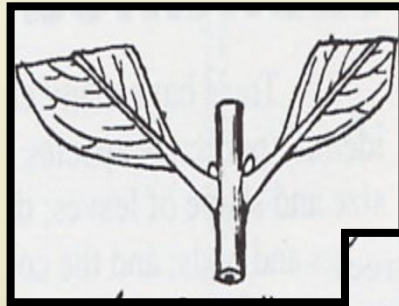
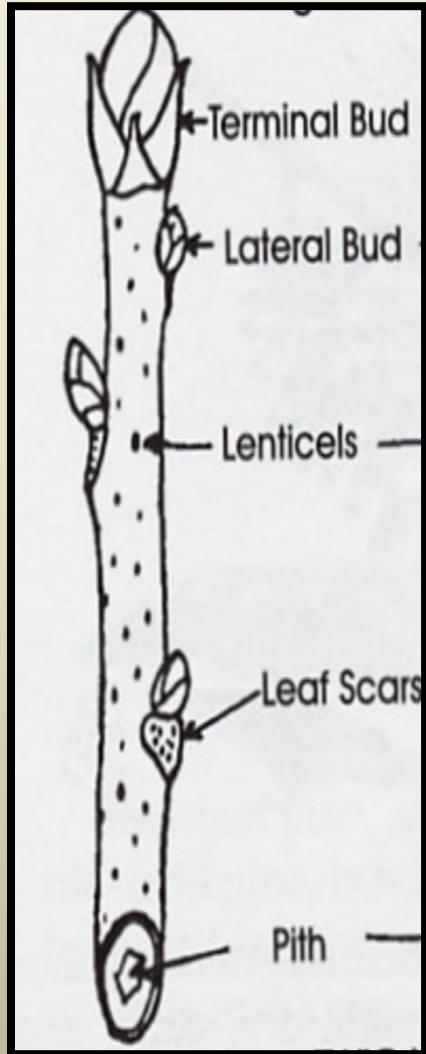
FORM



BARK



BUDS AND TWIGS



LEAVES,



FLOWERS, AND FRUIT



TOOLS: TREE & FOREST MEASUREMENT

- To estimate the volume of wood to buy and sell raw trees and turn into wood products, it is necessary to estimate not only the number of trees, but also the amount and size of wood for products such as homes, furniture, paper, construction and fuel. The quantity of wood in trees and logs must be measured and quantified for the wood market.
- Common forest and tree measurement terms.
 - Diameter
 - Log
 - Basal area
 - Stocking
 - Stand
 - Density
 - Merchantable
 - Board feet
 - Cubic feet
 - Cord



TOOLS: TREE & FOREST MEASUREMENT

- A method of forest and tree measurement is necessary to guide the sustainable management of the forest.
- Specific forestry tools are used to measure the spacing of trees in the forest: the diameter, age, height, and the volume of individual trees and logs
 - Compass
 - Increment borer
 - Diameter tape
 - Prism
 - Clinometer
 - Hypsometer or Biltmore stick



FUN FACTS!

- Home of Arbor Day!
 - In 1872 J Sterling Morton proposed a tree planting holiday called Arbor Day
- The State Tree!
 - eastern cottonwood



RESOURCES

- Tree ID – Trees of Nebraska, UNL EC publication, <https://nfs.unl.edu/documents/TreesofNebraska.pdf>
- Internet sites –
 - about.com -- forestry
 - Project Learning Tree Activity Guides, <http://plt.org>
 - Nebraska Forest Service, www.nfs.unl.edu
 - Nebraska Statewide Arboretum, Inc., www.arboretum.org
- And, don't forget to ask your local district forester for help (forestry books, practical help with using the forestry tools and answering questions), <http://nfs.unl.edu/foresters>



The left side of the slide features a vertical gradient bar transitioning from light beige at the top to a darker tan at the bottom. Overlaid on this bar are several thin, vertical lines in shades of grey and white. To the right of these lines is a cluster of five solid dark red circles of varying sizes, arranged in a roughly descending pattern from top-left to bottom-right.

RACHEL ALLISON, SOUTHWEST DISTRICT FORESTER
RACHEL.ALLISON@UNL.EDU

It is the policy of the University of Nebraska–Lincoln to not discriminate based upon age, race, ethnicity, color, national origin, gender, sex, pregnancy, disability, sexual orientation, genetic information, veteran’s status, marital status, religion or political affiliation.