ORNL Native Plant Landscaping – Can You Match Names to Plants?

1. Christmas Fern
2. Dogwood
3. Butterfly Weed
4. Eastern or Orange Coneflower
5. Dwarf Fothergilla
6. Horsetails/ Equisetum
7. Virginia Sweetspire/ Itea
8. River Oats
9. Oakleaf Hydrangea
10. Blackgum
11. Oakleaf Hydrangea
12. Cinnamon Fern

ANSWERS

A. Christmas Fern  G. Virginia Sweetspire/ Itea  D. 4  12
B. Dogwood  H. Eastern or Orange Coneflower  E. 5  11
C. Butterfly Weed  I. River Oats  C. 4  10
D. Dwarf Fothergilla  J. Blackgum  B. 3  6
E. Horsetails/ Equisetum  K. Oakleaf Hydrangea  A. 2  8
F. Purple Coneflower  L. Cinnamon Fern  1  7

For more information about ORNL native plant landscaping see the website:  https://portal.ornl.gov/sites/fo/nr/lm/default.aspx
Native Plants in the ORNL Landscape or What Happened to the Bradford Pear Trees?

Pat Parr (F&O) and Mike Ryon (ESD)
Reflect uniqueness

Attractive

Biologically diverse

Ecologically functional

Low maintenance

“Lab within a Park” concept
Use native plants
Advantages of native plants

• Provide a sense of place and highlight native flora
• Adapted to site and environmental conditions
• Not aggressive as many non-natives are
• Provide opportunities to educate and demonstrate sustainable approaches
• Support native insects, birds, and other wildlife for pollination, food sources, and nesting
• Often are deep-rooted providing effective stabilization
Why does native matter?

- no two plant species have the same leaf chemistry
- leaf chemistry gives each plant species a particular and unique taste, digestibility, and toxicity—probably related to protection
- most insects are adapted to feed or lay eggs on certain plant species
- native insects have adapted over the years to certain native plants
- if native plants are replaced by non-native plants, the insects cannot eat

Butterfly bush provides nectar for butterflies, but because native butterflies have not adapted to this non-native shrub, butterfly larvae cannot eat it so they die.
Why are insects important?

- worldwide 37% of animal species are insects
- insects excel at converting plant tissue to insect tissue
- insect tissue = high protein food for other wildlife
- insects pollinate plants, recycle nutrients from plants to soil, aerate and enrich the soil, and provide food

96% of terrestrial bird species rely on insects to feed young
Bradford Pear is on the Tennessee Invasive Plant list.
Serviceberry – *Amelanchier arborea*
Bradford Pear reverting to wild
Dogwood – *Cornus florida*
Witch hazel – *Hamamelis virginiana*
Rusty Blackhaw - *Viburnum* *rudifidulum*
Blackgum – Nyssa sylvatica
Cedarglade St. Johnswort – *Hypericum frondosum*
Winterberry/ Deciduous Holly - *Ilex verticillata*

- Use instead of non-native, invasive Japanese Barberry
- Attracts bees and birds
Dwarf Fothergilla – *Fothergilla gardenii*
Sweetspire – *Itea virginica*

use instead of non-native, invasive burning bush
Oakleaf Hydrangea – Hydrangea quercifolia
Summersweet or Sweet Pepperbush - *Clethra alnifolia*

- use instead of non-native, invasive butterfly bush
- attracts butterflies
Fragrant sumac – *Rhus aromatica*
Prairie Coneflower – *Ratibida pinnata*
Purple Coneflower – *Echinacea purpurea*
Eastern or Orange Coneflower – *Rudbeckia fulgida*
Coralberry - *Symphoricarpos orbiculatus*
• milkweed flowers June-Sept
• it supports monarch butterflies and 11 other butterfly species
Switchgrass – *Panicum virgatum* “Shenandoah”
Prairie dropseed – Sporobolus heterolepis
River Oats – *Chasmanthium latifolium*
Big Bluestem – *Andropogon gerardii*
Little Bluestem – *Schizachyrium scoparium*
Indian Grass – *Sorghastrum nutans*
Royal Fern – *Osmunda regalis*
Cinnamon Fern – *Osmunda cinnamomea*
Christmas Fern – *Polystichum acrostichoides*
Horsetails or Scouring Rush – *Equisetum hymale*
LANDSCAPING at OAK RIDGE NATIONAL LABORATORY

Oak Ridge National Laboratory (ORNL) is the largest and most diverse energy research and development institution within the Department of Energy. ORNL’s landscaping plan specifies that species native to the Oak Ridge Reservation (ORR) or the Valley and Ridge biological province of East Tennessee in which ORNL is located are the preferred choice for new plantings. It also advocates using ecological approaches to protect and enhance the lab’s environment.

Ecological landscaping uses sustainable practices to improve habitat, protect water quality, and enhance native wildlife. Using local plant species in an appropriate community design instead of typical ornamentals highlights the lab’s uniqueness, strengthens its relationship with its natural surroundings, and demonstrates its dedication to conserving and showcasing the environment.

People often expect plants to conform to their image of the “perfect” tree or flowering shrub and to show conformity that is not exhibited in nature. ORNL’s outdoor environment demonstrates how a less controlled landscape provides equal beauty and an experience that allows the user to notice small changes and variations.

Landscape management

Landscape are living entities that are in a constant state of flux—growing, changing with the seasons, and responding to ever subtle changes in the environment. Plants in the wild survive without human help. Unfortunately, the developed environment provides numerous stresses for plants, requiring more management.

ORNL’s landscaping plan includes a clear set of management principles covering watering, pruning, fertilizing, pest management, and lawn care. Prescribed burns, for example, provide more benefit to native grass communities than periodic mowing and are more cost effective. Following these principles ensures that the landscape meets or exceeds the expectations outlined in the plan.

**ORNL homepage “L” landscaping**