


SIGMA XI
Science Café

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**THE MERIT OF
NATIVE PLANTS IN
THE WOODS AND
THE GARDEN**

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What we won't talk about.

- Planting, fertilizing, or pesticide strategies.
- Specific individual species to plant or not plant.

What we will talk about.

- Importance of local, native plants in landscaping and nature.
- Local resources for deciding on how to landscape with native plants.

Definitions

- **Native**
 - Species that occurs naturally in an area,
 - Therefore, has not been introduced by humans either accidentally or intentionally



Lythrum alatum, winged lythrum (J. Anderson @ USDA-NRCS PLANTS Database)

Definitions

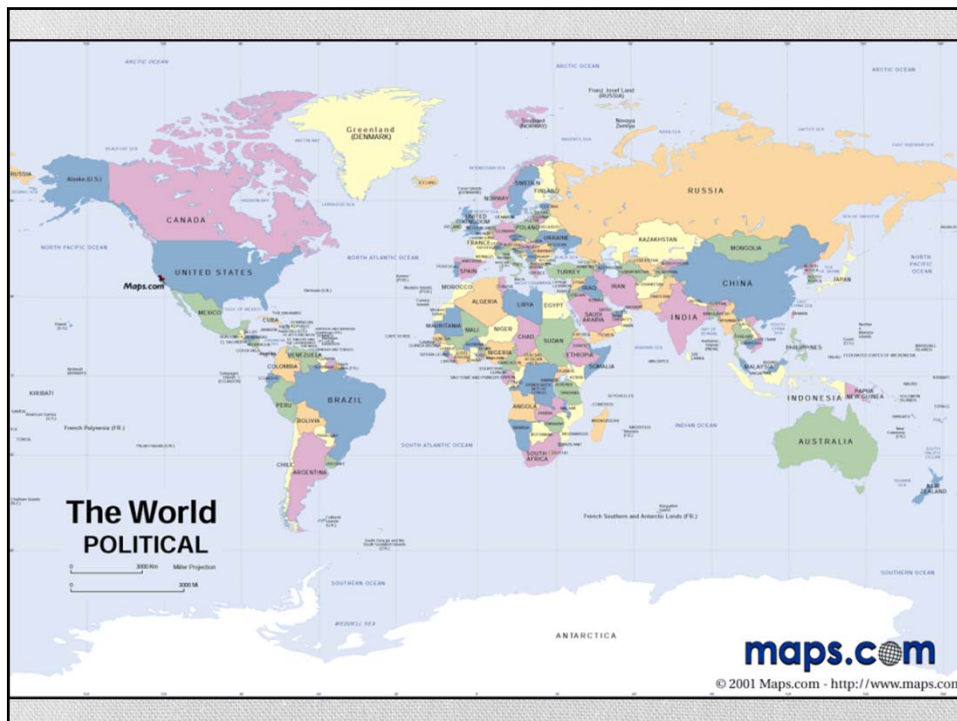
- **Non-native**
 - Species that occurs in an area because it has been introduced by humans either accidentally or intentionally
 - Also known as exotic or introduced species
 - May or may not become invasive
 - Causes some sort of economic or ecological damage

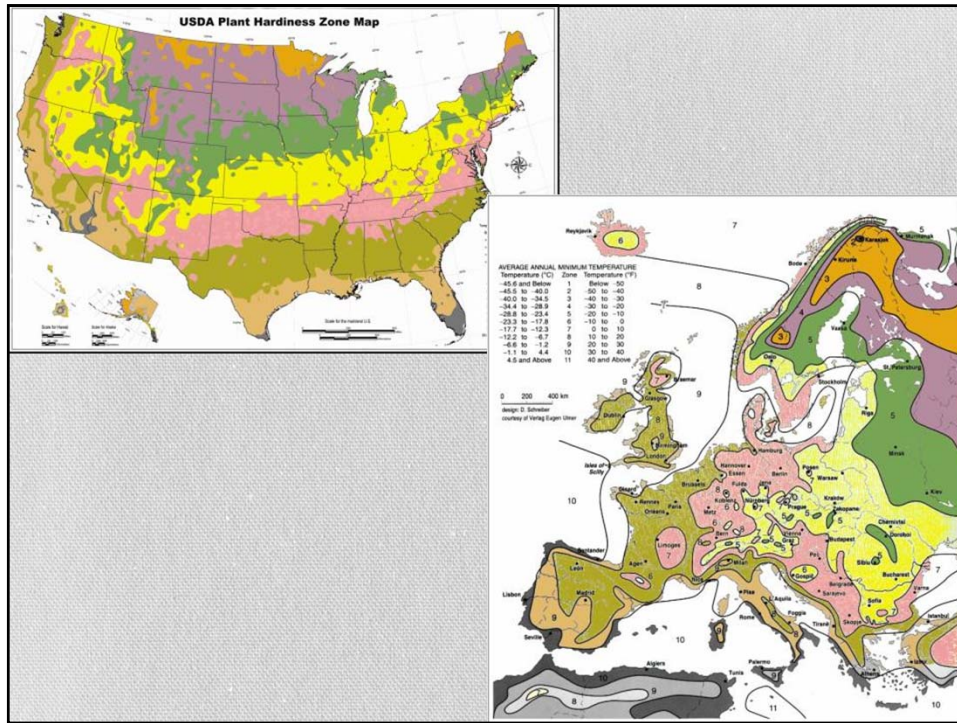


Lythrum salicaria, purple loosestrife (C.A. Monroe @ USDA-NRCS PLANTS Database)

How can you tell if something isn't native?

- Names tell us a lot.
- If the name contains:
 - Asian
 - Chinese
 - Japanese
 - European
 - Russian
- Just ask.
 - People working in landscaping or nurseries have often a good understand of where plants come from
- plants.usda.gov
 - Identify if plants are native or not





Detriments of Exotic Plants

- Large impacts are rare
- Loss of native species
- Economic losses
- Tens Rule
 - 10% of introduced species become established in the new environment
 - 10% of the established species spread
 - 10% of the spreading species have impacts of native species



Dipsacus fullonum, Fuller's teasel (T. Bretstaff @ tristram.squarespace.com)

Detriments of Exotic Plants

- Smaller impacts are more common
- Often, only a few species are used when exotic species are planted
 - Birds, butterflies, other wildlife and insects usually require diverse diets
- Changing wildlife diets
 - Exotic plants often produce thousands of very attractive berries, flowers, and other fruits.
 - Berries and fruits of exotic plants usually do not provide proper nutrition to wildlife
 - Common buckthorn, autumn olive,
- Changing insect diets
 - Exotic flowers do not always provide adequate sugar to butterflies foraging



Rhamnus cathartica, common buckthorn (D. and B. Zouras @ icode6.net/native_suburbia)

Benefits of Native Species

- Proper nutrition to wildlife
 - Songbird populations are larger and more diverse in areas with diverse native plant communities
- Since native plants are adapted to NE Indiana, they generally grow well and require less care than exotic plants
- Proper cover for wildlife
- Adequate nectar for hummingbirds and butterflies
 - Also, proper host plants for butterfly caterpillars



Viburnum acerifolium, mapleleaf viburnum (J. McMillan @ Almost Eden)

Benefits of Native Species



Impatiens capensis, jewelweed (D. Ramsey @ Wikipedia)



Archilochus colubris, ruby-throated hummingbird (J. Howard @ Nature Works Photography)



Bombus sp., bumblebee (E. Vanover @ picasaweb.google.com)

Benefits of Native Species



Campsis radicans, trumpet creeper (S. Shebs @ Wikipedia)



Archilochus colubris, ruby-throated hummingbird (T.G. Barnes @ University of Kentucky)



Icterus galbula, Baltimore oriole (Redgannet @ redgannet.blogspot.com)

Benefits of Native Species



Lobelia cardinalis, cardinalflower (T.G. Barnes @ USDA NRCS PLANTS Database)



Archilochus colubris, ruby-throated hummingbird (T.G. Barnes @ University of Kentucky)



Papilio polyxenes, eastern black swallowtail (T. Kitchin & V. Hurst @ Leeson Photo)



Benefits of Keeping Forests as Forests

- Urbanized and developed areas are unsuitable for many wildlife species
- Forests provide wildlife with shelter
 - Protection from predators
 - Secure nesting locations for birds
- Forests provide adequate forage
 - When native plants are retained in forests, proper food is available to wildlife
 - However, when exotic species dominate a forest issues arise
 - Lack of suitable food resources
 - Need to forage farther from protection



Resources

- Indiana Native Plant and Wildflower Society
 - inpaws.org
 - Sources of native plants and supplies
 - Indiana native plant references
- Wild Ones, Gibson Woods Chapter
 - gw-wildones.org
 - Indiana chapter of a national native plant organization
 - Located in Hammond, IN with an annual native plant sale in May
- Midwest Native Plant Society
 - midwestnativeplants.org
 - Landscaping recommendations identifying which plants attract butterflies and humming birds
- Wildflower Association of Michigan
 - More reference material related to landscaping with native plants
 - Native plant greenhouses in Michigan
- USDA PLANTS Database
 - plants.usda.gov
 - Identify if plants are native or not