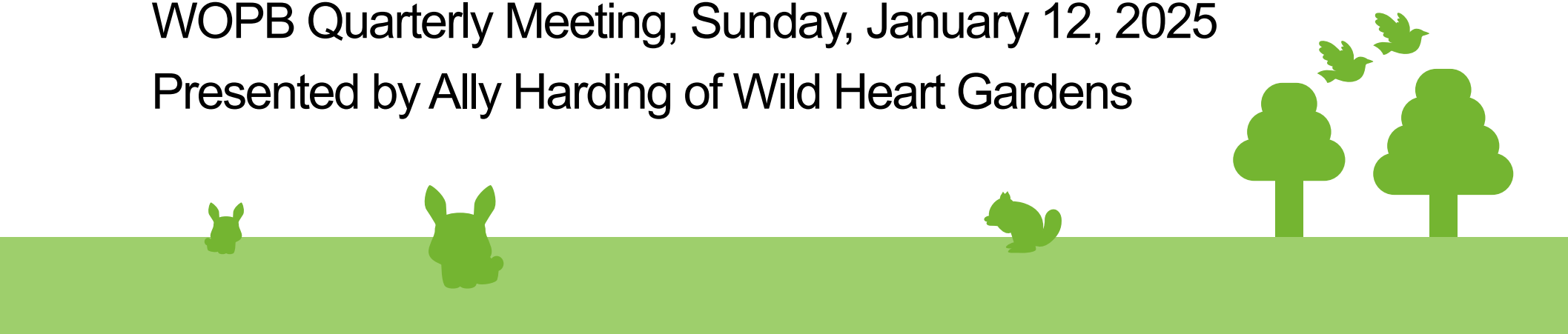
Wild Ones Ponchartrain Basin

Ask Ally Workshop
Invasive & Aggressive Plant ID & Management
~ Bring Your Problem Plants ~

WOPB Quarterly Meeting, Sunday, January 12, 2025

Presented by Ally Harding of Wild Heart Gardens



I’m not an expert…

- … but I do care to share what I know from:
  - Working with Swamp Fly Native Landscapes and Wild Heart Gardens
  - BREC invasives workshop in August 2023
  - My own yard work in Tickfaw

- We all have valuable experiences we can share to better equip everyone to help knock back invasives, so please share with the group!

Topics

- Definitions
- Management
- Botany
- Invasive Species Examples
- Crowd Examples

Definitions

Native vs. Exotic Plants

- Native plant:
  - “A native plant species is one that occurs naturally in a particular region, ecosystem and/or habitat, and was present prior to European settlement.” -Wild Ones, Guidelines for Selecting Native Plants: The Importance of Local Genotype[1]
  - Focus on relationships among organisms in a certain area

Native vs. Exotic Plants

- Exotic plant:
  - “Exotic species, also known as alien, introduced, or non-native species, are simply those transferred to a new geographic location previously unoccupied by that species”
    -LDWF, Wildlife Action Plan 2015[2]
  - The opposite of a native plant
  - Lack of relationships with organisms in a new area

Invasive vs. Aggressive Plants

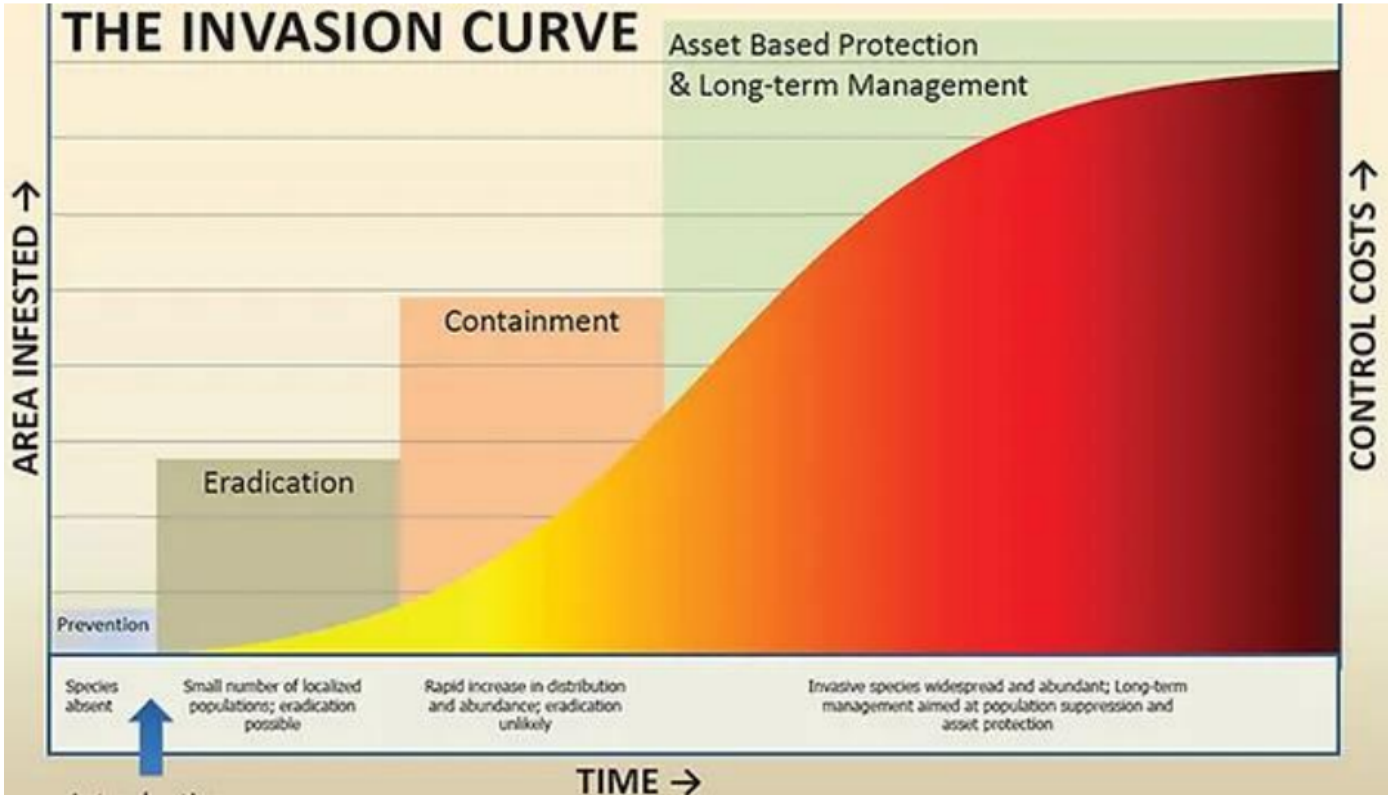
- Invasive species:
  - “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health” -Executive Order 13112, Invasive Species, 1999[3]
  - Focus on harm

Invasive vs. Aggressive Plants

- Aggressive plant:
  - “An aggressive plant is one that spreads faster than preferred, or into an area of your garden where it is unwanted. A plant may be aggressive in one area of a garden or neighborhood and well behaved in another.”
    -Chicago Botanic Gardens, Aggressive and invasive plants[4]
  - Focus on rapid spreading, might not cause harm

Management

Importance



- Crowd out native plants
- Cost of management drastically increases once an invasive plant has established itself and begins to spread rapidly

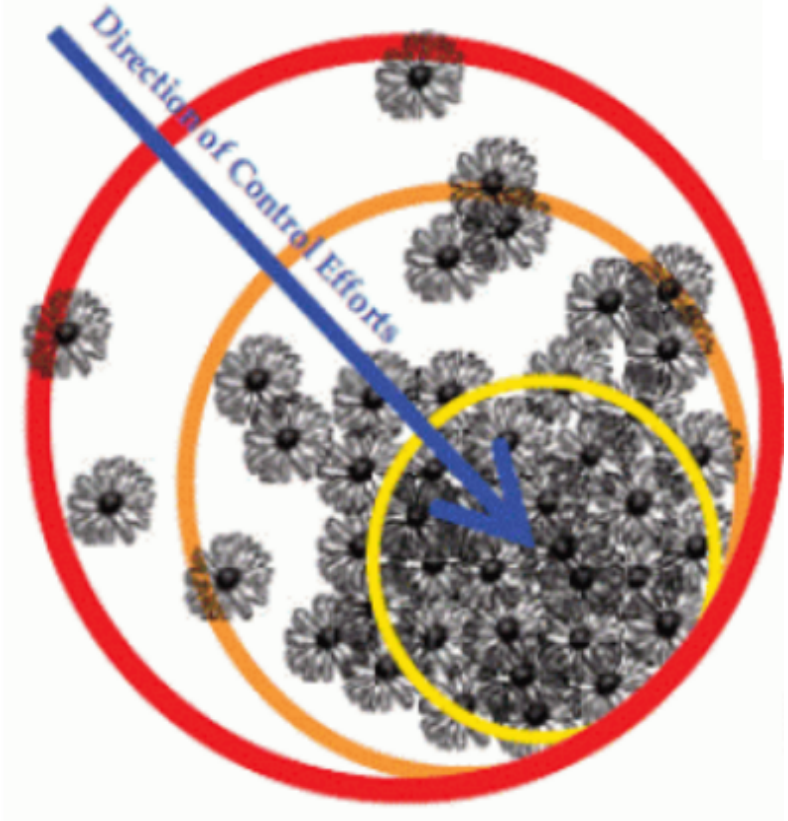
Graph from BREC Invasive Species Workshop' presentation[5]

Importance

- Estimated acres covered by invasive species in Louisiana (Miller et al. 2008)
  - Chinese Tallow: 137,162 acres (0.4% of the state)
  - Chinese Privet: 103,102 acres (0.3 % of the state)
  - Japanese Climbing Fern: 73,654 acres (0.2 % of the state)
  - Glossy Privet: 26,893 acres (< 0.1 % of the state)

Area covered info from BREC Invasive Species Workshop' presentation[5]

Importance



- Plants can cover acres of area but spread is reduced by each plant we remove
- Removing outliers helps contain the infestation so do what you can!

Graphic from BREC Invasive Species Workshop' presentation[5]

Strategies

- Prevention – plant natives!
- Mechanical – hand pulling, mowing, chopping, burning
- Chemical – responsible application of herbicide
- Biological – LSU is doing research on this option
- Integrated Pest Management – multi-pronged approach that hinges on correct pest identification

Strategies

- Best to act when seeds are not present to avoid distribution
- When manually pulling or using a tree wrench, best to work when the soil is moist to facilitate removing all roots
- Where possible, bag and dispose of debris through landfill collection to prevent re-rooting, seed distribution, etc.
- Can burn some materials
- Some species readily eaten by grazing animals!
- Get creative – every effort helps

Where to Find More Info

- LDWF's "Wildlife Action Plan" Chapter 6. 'Invasive Species'
  - https://www.wlf.louisiana.gov/resources/category/wildlife-action-plans
- LSU AgCenter's Center of Research Excellence for the Study of Invasive Species
  - https://www.lsuagcenter.com/topics/environment/invasive%20species
- USDA's National Invasive Species Information Center
  - https://www.invasivespeciesinfo.gov/terrestrial/plants

Where to Find More Info

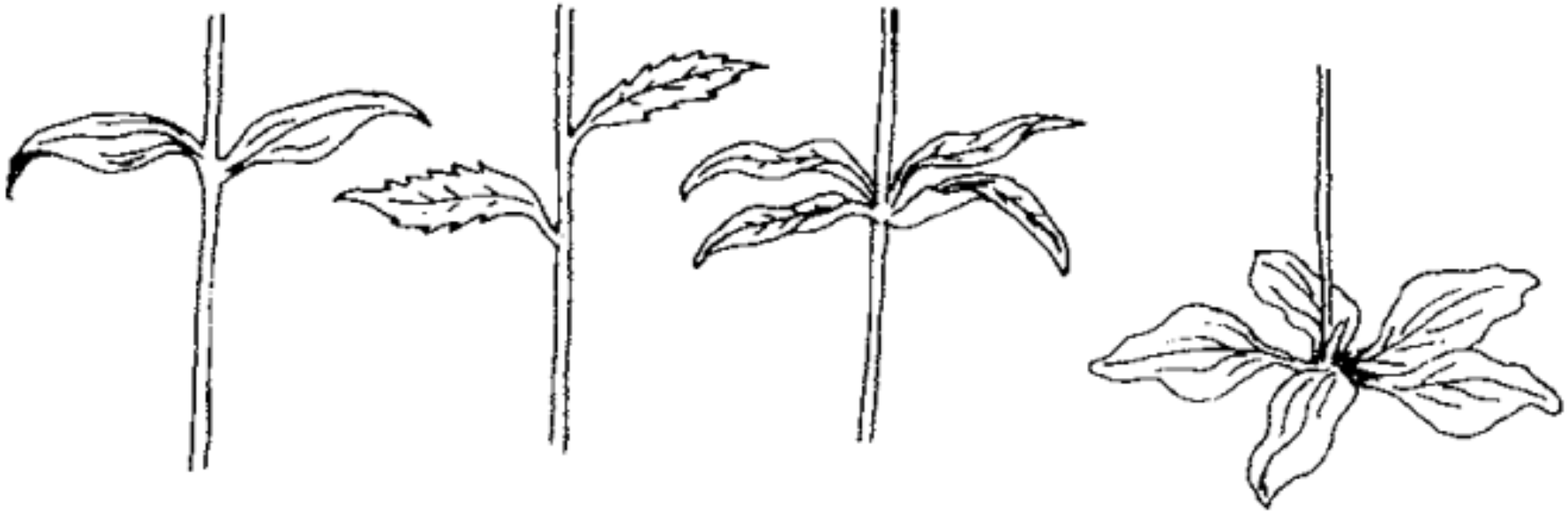
- USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"
  - https://research.fs.usda.gov/treesearch/35292
- USDA Forestry Service's "A management guide for invasive plants in southern forests"
  - https://research.fs.usda.gov/treesearch/36915
- Apple App 'Invasives in Southern Forests' by Charles T. Bargeron
  - https://apps.apple.com/us/app/invasives-in-southern-forests/id495852751

Botany

Leaf Classifications

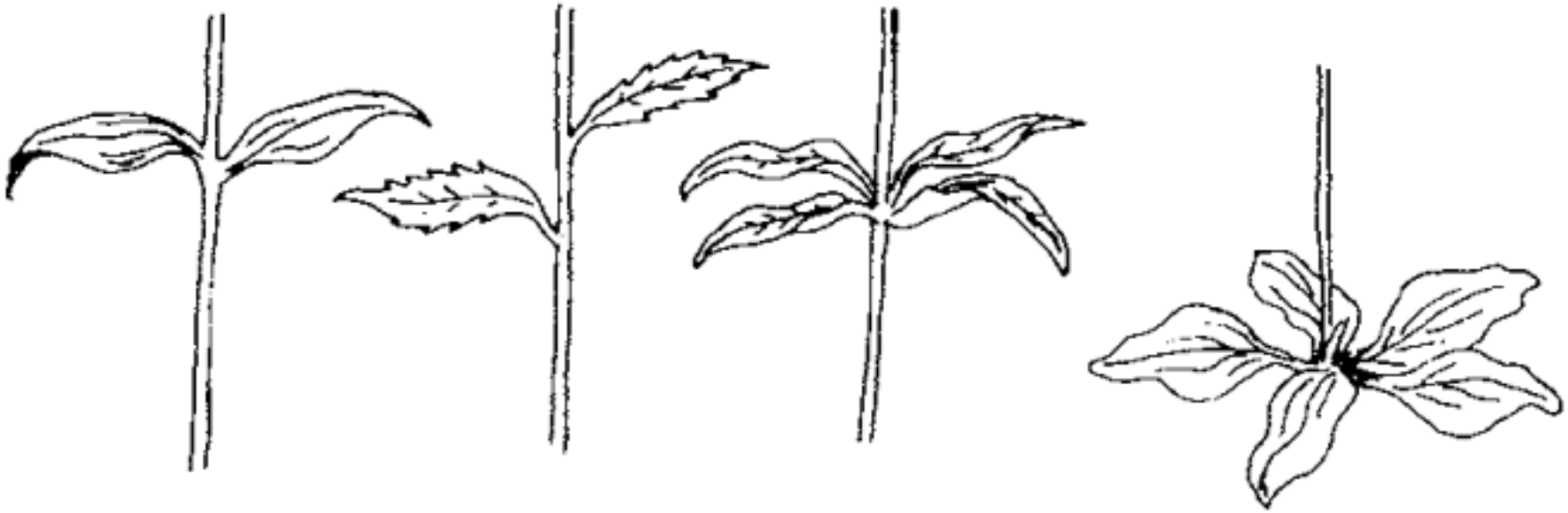
- Stick around longer than flowers or fruits so they are worth learning about to aid in plant identification
- Leaf arrangement
- Major vein arrangement
- Leaf divisions
- Leaf margins
- Leaf shapes

Leaf Arrangement



Graphic from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

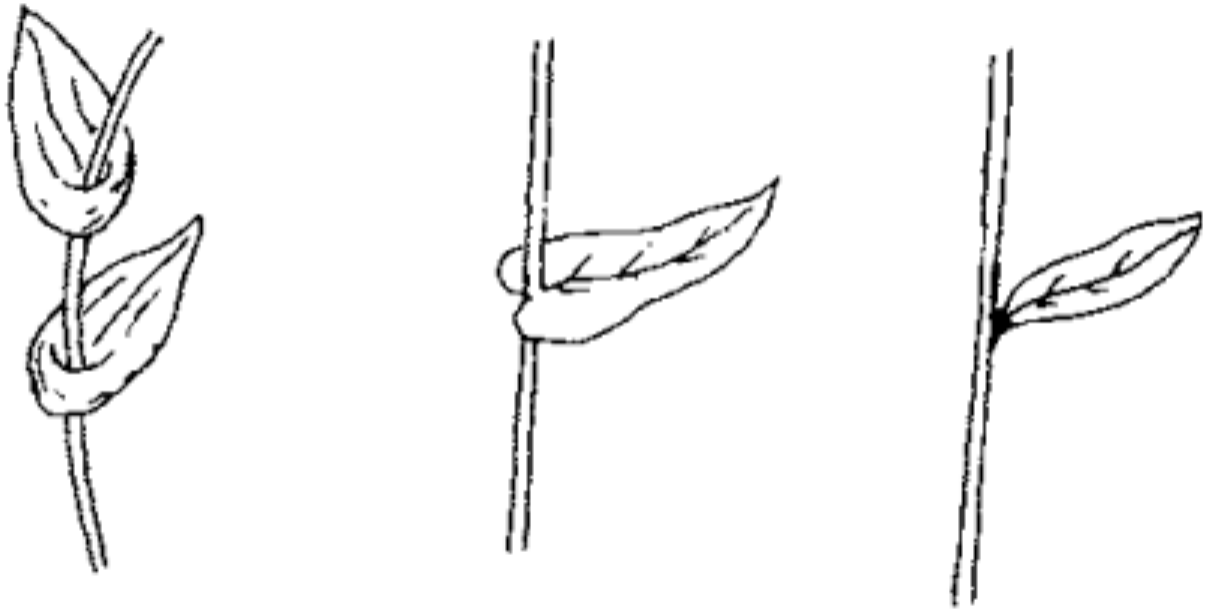
Leaf Arrangement



opposite alternate whorled basal rosette

Graphic from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Leaf Arrangement



perfoliate clasping sessile

Graphic from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Major Vein Arrangement

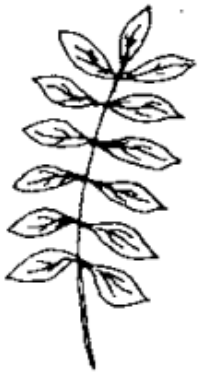
- Pinnate
- 1 major vein

- Palmate
- 3, 5, 7 … major veins

Graphics from Freepik[7]

Leaf Division

simple



pinnately compound

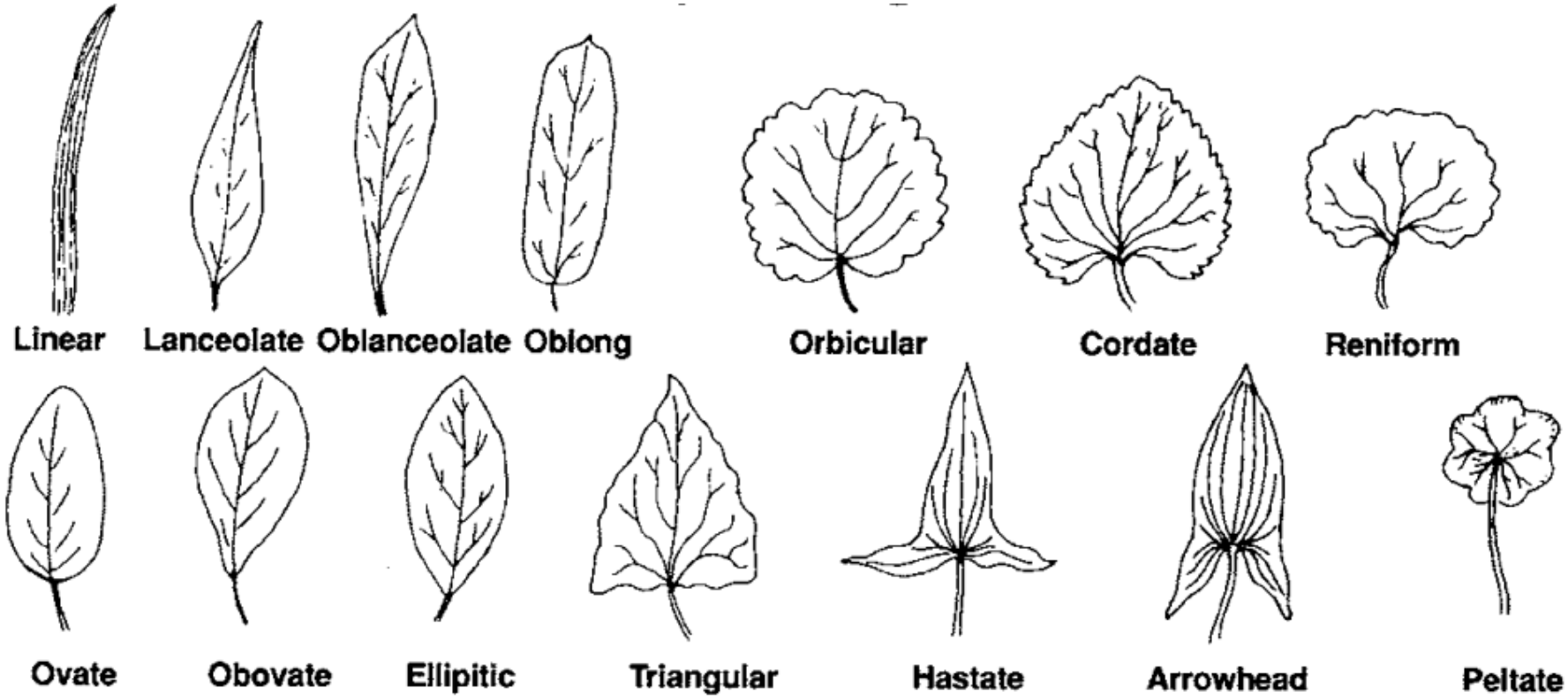
palmately compound

trifoliate (3-leaflet)

bi-pinnately compound

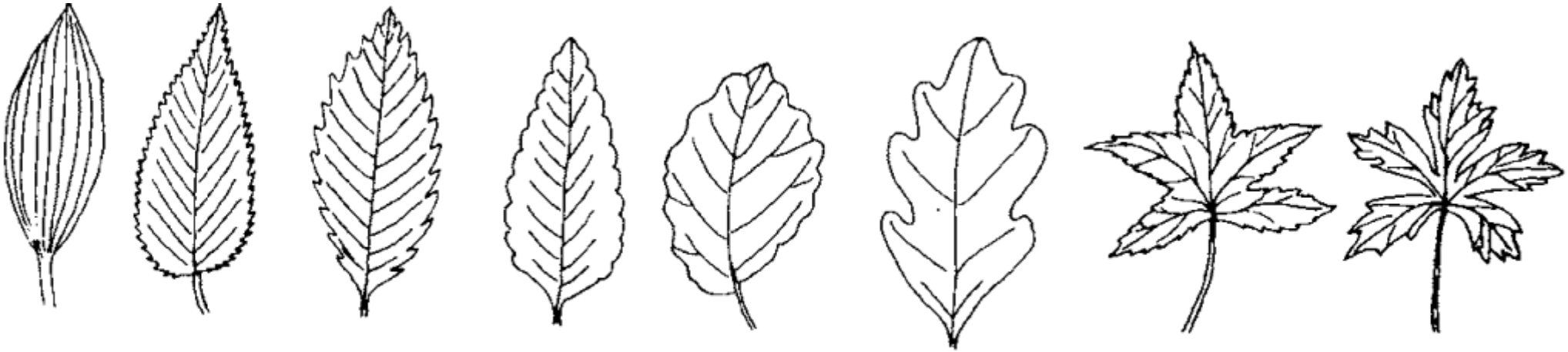
Graphic from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Leaf Shape



Graphic from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Leaf Margin



entire aka ‘smooth’

crenate aka ‘scalloped’

Graphic from USDA Forestry Service’s “A field guide for the identification of invasive plants in southern forests”[6]

Invasive Species Examples

Chinese Tallow Tree (Triadica sebifera)

- Popcorn tree
- Tallow tree

Leaf arrangement?

Image from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Chinese Tallow Tree (Triadica sebifera)

- Medium-sized tree, up to 3ft. diameter; 20 to 50 ft. tall
- Alternately arranged, simple, spade-shaped, green leaves turn color in the fall
- Leaves have smooth margins and a pointed tip
- Flowers arranged in a long spike
- Fruit form in the fall, 3-lobed capsule containing white, waxy seeds that look like popcorn

Slide from BREC Invasive Species Workshop presentation[5]

Chinese Tallow Tree (Triadica sebifera)

- 3 year old saplings can produce seeds
- Resprouting from roots is common
  - Cut multiple times
  - Cut and apply herbicide (hack and squirt or cut and paint)

Images from BREC Invasive Species Workshop presentation[5]

Chinese Privet (Ligustrum sinense)

Leaf arrangement?

Image from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Chinese Privet (Ligustrum sinense)

- Medium-sized midstory shrub, up to 30 ft. tall
- Opposite, simple, elliptic or ovate semi-evergreen leaves
- Leaves have smooth margins
- White flowers arranged in loose panicles bloom April – November
- Immature fruits are green drupes that form in the summer and mature to black

Slide and images from BREC Invasive Species Workshop presentation[5]

Chinese Privet (Ligustrum sinense)

- Manual removal
  - cut multiple times
  - digging
  - shrub wrench
- Foliar pesticide spray or cut and paint

Images from BREC Invasive Species Workshop' presentation[5]

Other Privet spp.

Management strategies are similar across invasive privet species

- Japanese privet (*Ligustrum japonicum*)
- Glossy Privet (*Ligustrum lucdium*)
- Common/European Privet (*Ligustrum vulgare*)

Coral Ardisia (Ardisia crenata)

- Hen's eyes

Leaf margin?

Image from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Coral Ardisia (Ardisia crenata)

- Perennial evergreen shrub, typically no taller than 4-5 ft
- Glossy, thick, dark green leaves up to 8 inches long
- Distinct crenate margins
- White or pinkish flowers in axillary clusters
- Bright red fruit form in the fall and can persist through winter

Slide and images from BREC Invasive Species Workshop' presentation[5]

Coral Ardisia (Ardisia crenata)

- Seeds have high germination rate
- Manual removal
  - Carefully remove and bag fruit
  - Pry with a straight backed hammer!
- Foliar or basal pesticide spray

Photo from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6] and hammer from Freepik[7]

Japanese Climbing Fern (Lygodium japonicum)

- Perennial viney fern, climbing and twining, to 90 feet
- Lacy, finely divided fronds along green to orange to black wiry vines or rachis
- Fronds opposite on vine, compound, once or twice divided, varying in appearance according to the number of divisions
- Produces tiny, wind-dispersed spores from sporangia (spore producing dots) in late summer to fall

Info and image from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Japanese Climbing Fern (Lygodium japonicum)

- Inspect pine straw mulch for seedling emergence
- Manual removal
  - Must remove creeping rhizomes: slender, wiry, dark brown
- Foliar pesticide spray

Info and image from USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"[6]

Acknowledgments

- Many thanks to BREC's Natural Resource Management Division for permission to use material from their 'BREC Invasive Species Workshop' presentation I was able to attend in 2023

- Please contact Sharon King for more information about where BREC has active invasive species control programs
- sharon.king@brec.org
- www.BREC.org/conservation

Crowd Examples

Sources

1) Wild One's 'Guidelines for Selecting Native Plants: The Importance of Local Genotype' https://wildones.org/resources/guidelines-for-selecting-native-plants/
2) LDWF's "Wildlife Action Plan" Chapter 6. 'Invasive Species' https://www.wlf.louisiana.gov/resources/category/wildlife-action-plans
3) Pres. Clinton's 'Executive Order 13112 - Invasive Species' https://www.invasivespeciesinfo.gov/executive-order-13112

Sources

4) Chicago Botanic Gardens' 'Aggressive and invasive plants' https://www.chicagobotanic.org/plantinfo/aggressive_and_invasive_plants

5) BREC's Natural Resource Management Division's 'BREC Invasive Species Workshop' presentation 2023

6) USDA Forestry Service's "A field guide for the identification of invasive plants in southern forests"

https://research.fs.usda.gov/treesearch/35292

Sources

7) Freepik www.freepik.com