Plant Identification Strategies

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Plant Blindness

Human tendency to ignore differences in vegetation.

- Inability to distinguish between different plants.
- Results in the inability to recognize the importance of plants.

Human based error to think plants are inferior to animals.

Why?

- Plants barely move
- Grow close together
- Typically similar in color

Why it matters

- Plants make up 57% of the endangered species list, yet receive less than 4% of the funding for recovery.
- More than 28,000 plants are used medicinally, with many more uses to be determined.
- Toxic plants exist in all ecosystems, ability to recognize them is important to human safety.
- Plants are active components of an ecosystem.

What is in a Name?

Information!

- Plant family, specific Latin name, common name.
- Life Cycle – Annual, biennial, perennial?
- Toxicity information – Can I touch it? What if my dog eats it?
- Herbicide use – Is it listed on the label? Is there any known resistance issues?
- Noxious Weed Status – Is it listed? What is my responsibility to manage?

Plant Characteristics

- Plant Habit
- Leaf Arrangement
- Leaf Shape
- Leaf Attachment
- Flower Arrangement
- Flower Structure
- Fruit Type
- Roots, underground structures

Plant Habit

- Grass (and grass like) – plants with long, narrow leaves, with jointed stems and spikes of small, wind-pollinated flowers.
- Herbaceous Forbs – Non-woody plants that are not grass-like. Dies back to the ground seasonally.
- Shrubs – Woody plants that are perennial. Typically multi-stemmed and shorter in height compared to trees.
- Trees – Woody perennial plants, typically with a single upright stem and taller in height compared to shrubs.

Leaf Arrangement

Describes the way the leaves grow along the stem.

BASAL

ALTERNATE

OPPOSITE

WHORLED


UGA2307045


1555233


UGA1459483

Leaf Shape

Describes the shape of the leaf surface.

Leaf Margin

Leaf Attachments

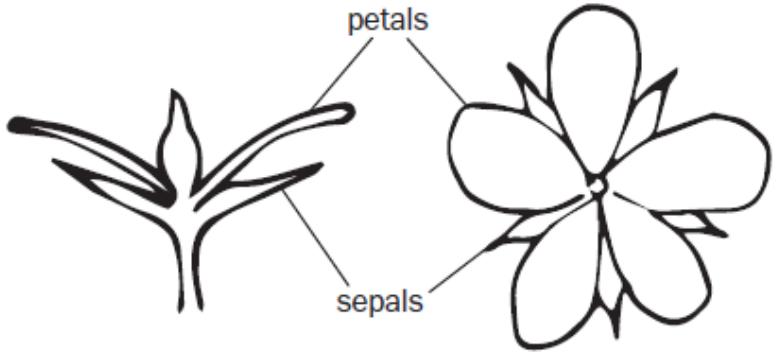
Flowers

- Color
- Arrangement
- Bloom time
- Bloom shape

Floral Anatomy

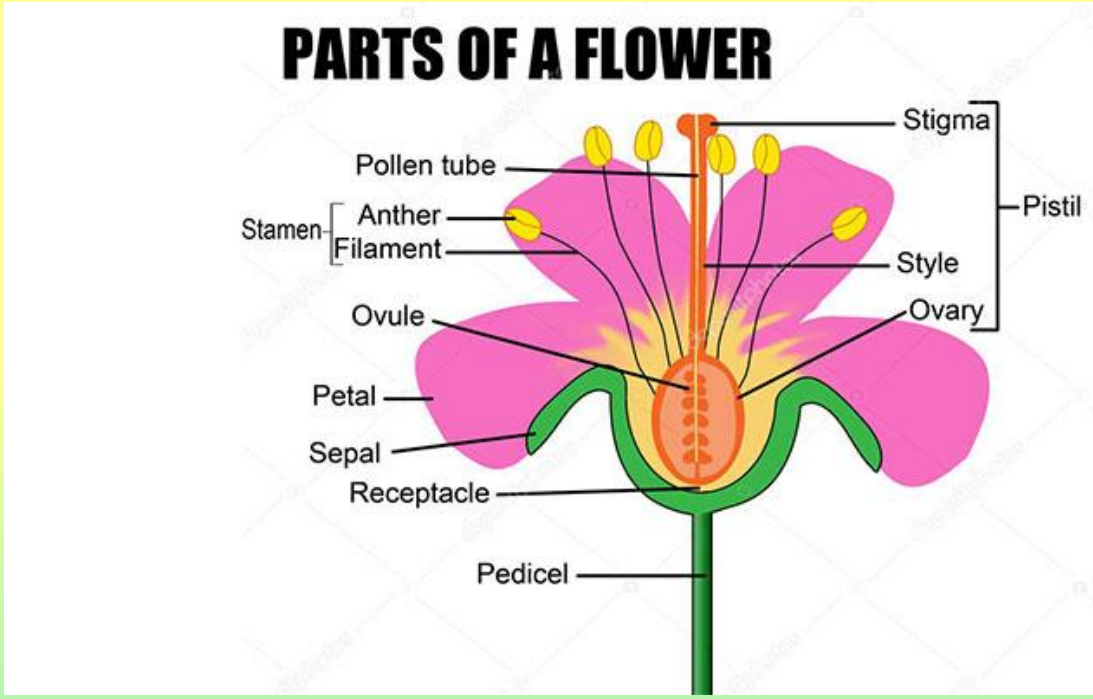
FIGURE 9. Sepals, the outermost whorl of a flower (forms a star in this example).

FIGURE 10. Sepals and petals from a side view and above.



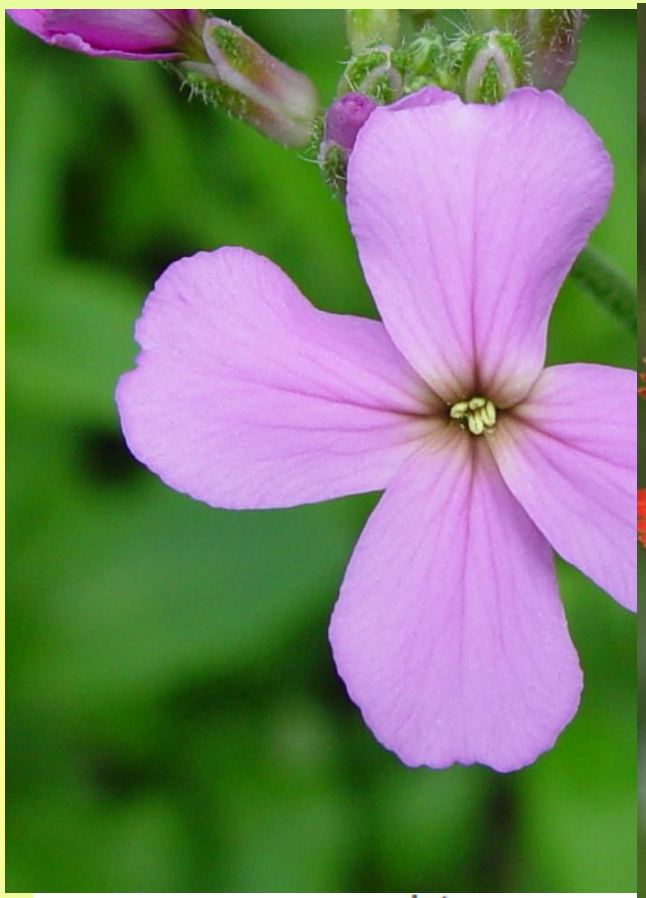
Floral Anatomy

- Stamen – Male reproductive organ.
- Pistil – Female reproductive organ.



Aster Anatomy

Flower shape



campanulate (common in Campanulaceae)

cruciform (Brassicaceae and a few other families)

head (Asteraceae)

spurred (some Plantaginaceae and other families)

papilionaceous (Fabaceae)

Inflorescence type

- Describes the shape and arrangement of groupings of flowers.

spike


raceme


panicle


corymb


umbel

Other Traits to look for:

- Fruiting type
- Root systems
- Spines or modified growths
- Leaf texture and surface

Conclusion

- All of the different plant traits should be used in combination to determine identification.
- Use resources to confirm your identifications (plant apps, books, local professionals).
- Seasonality can have a large impact on plant traits. If you are unsure of a plant, visit it over the growing season to observe seasonality.