Basis of Woody Plant Identification

I. Looks (Appearance)

A. Leaves

1. Arrangement
   - -alternate
   - -opposite (MOD CAP HORSE)
   - -whorled
   - -fascicles
2. Composition
   - -simple
   - -compound
     - —pinnately compound
     - —bipinnately compound
     - -- palmately compound
3. Shape

acicular


scalelike


linear


oblong


lanceolate


oblanceolate


ovate


obovate


elliptical


oval


orbicular


reniform


cordate


deltoid


rhomboid


spatulate

4. Leaf Margins


revolute


entire


repand


sinuate


crenate


serrate


dentate


doubly serrate


doubly crenate


lobed

5. Leaf Apex


acuminate


acute


mucronate


cuspidate


obtuse


rounded


truncate


emarginate

6. Leaf Base


cuneate


acute


cordate


inequilateral


obtuse


rounded


truncate


auriculate

7. Leaf Venation
    - -parallel
    - -pinnate
    - -arcuate
    - -palmate

8. Leaf Surface
    - -glabrous
    - -pubescent
    - -tomentose
    - -scabrous
    - -glaucous
    - -rugose
    - -glandular
    - -stomatal bands

9. Leaf Retention
    - -deciduous
    - -tardily deciduous
    - -persistent (evergreen)

B. Floral Arrangement

ament spike raceme panicle umbel corymb

C. Fruit Types

I. Gymnosperms (Naked Seed — Seed Does Not Develop Within A Carpel)

A. Cone — Composed of woody, leathery or fleshy scales, each with one or more seeds; scales generally arranged along a central axis.
Example — Pine

B. Single seed partially or wholly surrounded by a fleshy covering (Aril)
Example — Yew

II. Angiosperms (Seeds Develop Within A Carpel)

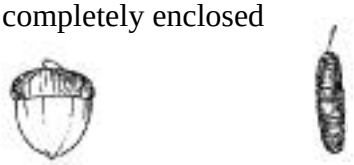
A. Dry fruits (dry pericarp — carpel walls)

1. Indehiscent fruits

A. Achene — 1-Seeded, unwinged fruit; often feathered (plumose). Example — Sycamore

B. Samara — Winged, achene-like fruit
Example — Ash, Maple, Elm

C. Nut — Usually 1-seeded; with a bony, woody, leathery, or papery wall and usually partially or completely enclosed within a husk.
Example — Oak, Birch



2. Dehiscent Fruit

A. With a single carpel (chamber)

1. Follicle — Carpel splits along 1 suture to release seeds.
Example — Milkweed, Magnolia

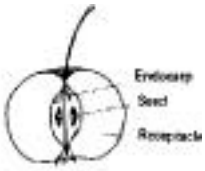
2 Legume — Pod-like fruit which splits along 2 lines of su
Example — Black Locust, Bean, Pea.

B. With 2 or more fused carpels (chambers)

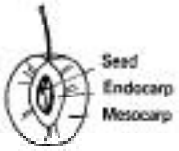
1. Capsule — May open in one of several ways.
Example — Aspen, Lilac, Catalpa, Horsechestnut

B. Fleshy Fruits (Fleshy Pericarp — Carpel Walls)

1. Pome — Pericarp cartilaginous (papery), enclosing numerous seeds; fleshy portion derived from sepals, petals, and stamens. Example — Apple, Pear, Mountain Ash, Hawthorn



2. Drupe — Usually 1-seeded; with a thin exocarp (skin), fleshy mesocarp and a stony endocarp
Example — Prune, Cherry, Plum, Peach, Raspberry

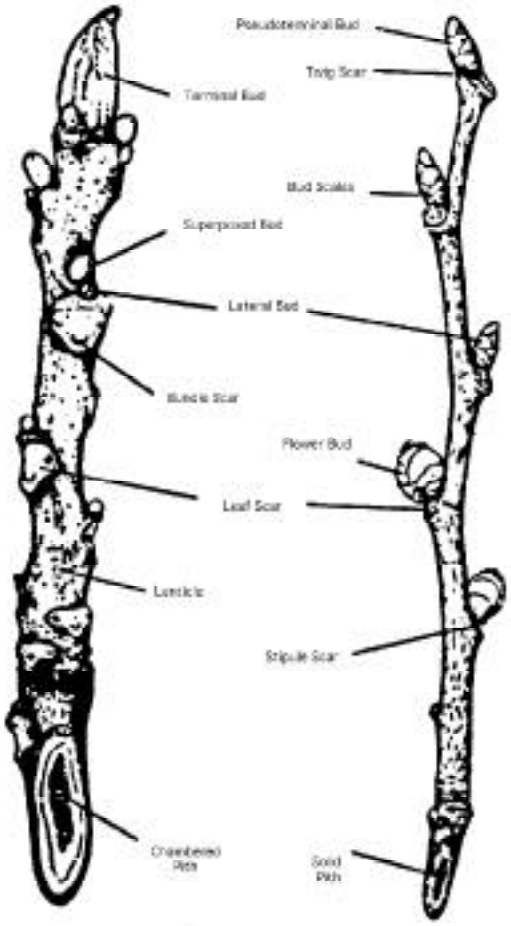


3. Berry — Usually multi-seeded; entire pericarp fleshy.
Example — Blueberry, Tomato, Persimmon, Grape

D. Twigs

1. Buds
    a. types:
        -terminal
        -pseudoterminal
        -lateral
        -superposed
        -floral
        -vegetative
        -mixed

    b. covering
        -naked
        -scaly
            —imbricate
            —valvate
            —single, cap-like scale



2. Leaf Scars
3. Vascular Bundle Scars
4. Stipule Scars
5. Lenticels
6. Pith
    a. solid
        -homogeneous
        -diaphragmed
    b. chambered
    c. hollow

7. Thorns, Spines, Prickles

E. Bark

1. Pattern
2. Color
3. Hardness
4. Thickness

F. Tree Size and Shape

II. Location (Range and Site)

A. Range

-- Some typical ranges:

N.E. US and S.E. Can.

Central. US

Transcontinental

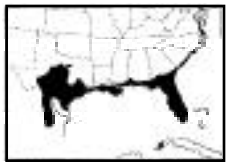
N.E. US and App. Mtns.

East. US and Great Plains

Eastern. US

Upper Midwest

S.E. US and Miss. Val.



Gulf and Atl. Coast Plains

Appalachians

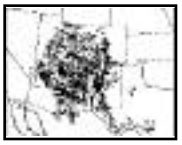
Western Mountains

Pacific Coast

Sierra Mtns.

Rocky Mtns.

Pacific Coast and Inland Empire



Southern Rockies

B. Site

C. Stage of Succession