

# Horticulture and Ecology

## ENPL236

Horticulture  
Identification of plant  
Types of plants -1

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# Requirement of plants

- Light
- Water
- Air
- Nourishment
- Temperature, hardiness
- Soil
- spacing

# light

- natural light from sun for photosynthesis
  - Full shade from buildings,
    - deep shade from dense foliage ,
    - half equalized proportion of full sun and shade
    - light , filtered shade

# water

- All plants need water
- From rain or irrigation
- Obtained through soil, spray the leaves, dew
- Drought resistance plants best for semi- arid and arid areas

# Nourishment and fertilizers and pesticides

- Nitrogen stem foliage
- Phosphorous roots
- Potassium flowers and fruits
- Iron , magnesium, boron, copper
  
- Found naturally in the soil from parent rock
- or by adding fertilizers
- Be careful in using fertilizers
- Pesticides for aphids and disease

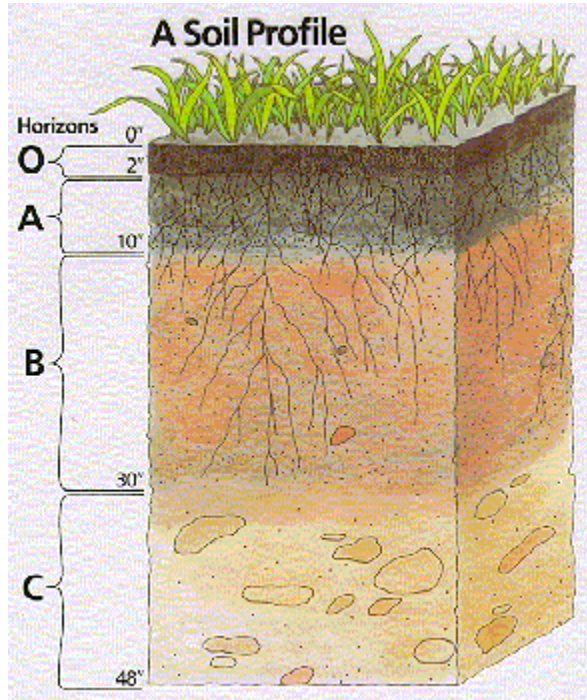
# temperature

- Hardiness (resist cold weather)

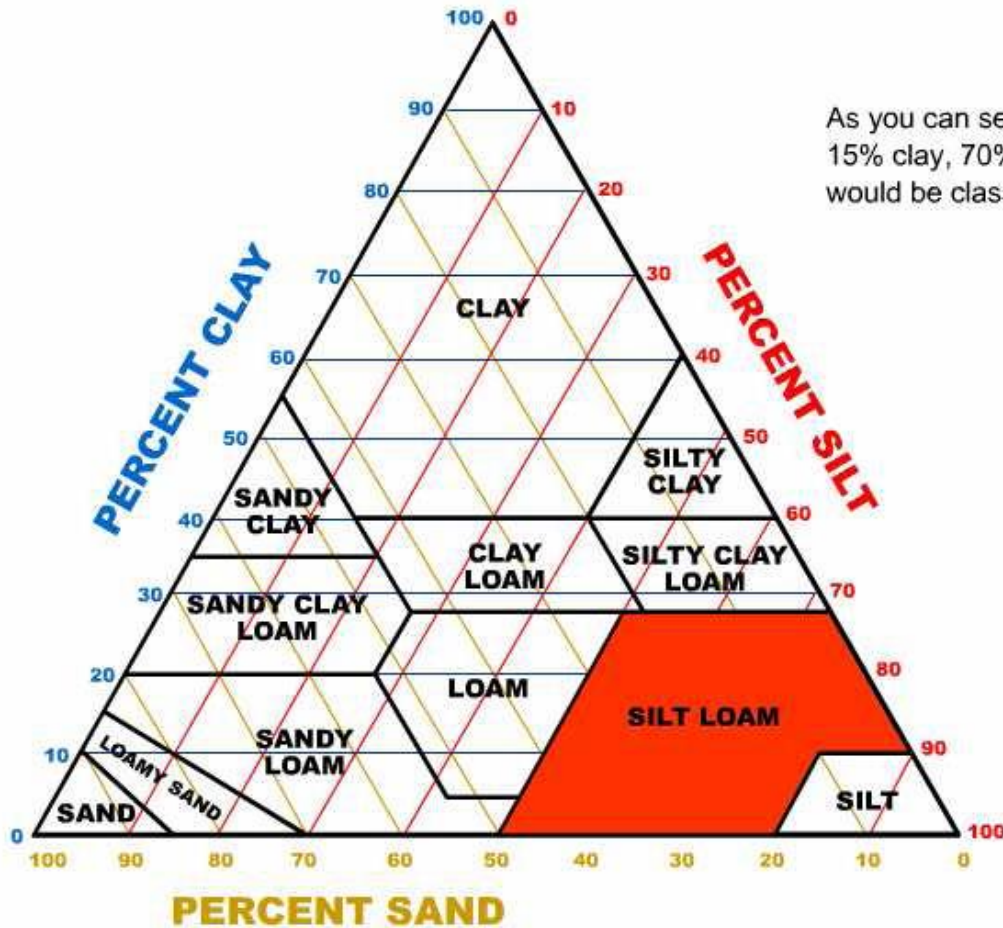
# Soil

- Sand, silt, clay
- Top soil , humus -nutrient organic material
- Sub soil reservoir (parent rock)
- ph

### A Soil Profile







As you can see, a sample containing 15% clay, 70% silt, and 15% sand would be classified as silt loam.

# Air

- Air in the soil, availability of oxygen in the soil
- Water logged, clay soils are oxygen- deficient
- Loose soil

# spacing

- Depend on spread

# Ordering and Planting

- Ordering samplings or seeds from available nurseries
- For planting prepare the soil
- Digging hole with suitable size , plant and water

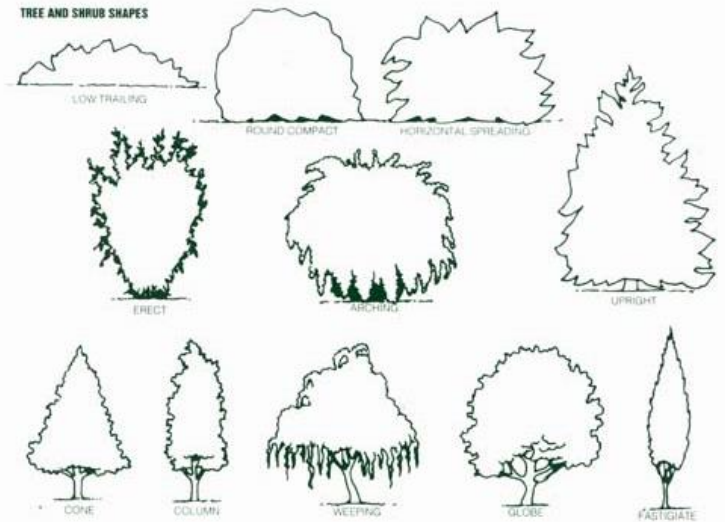
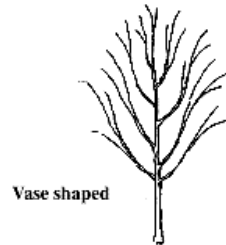
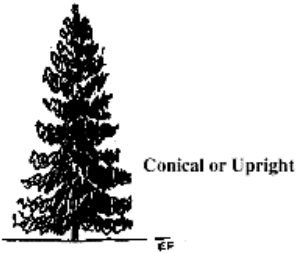
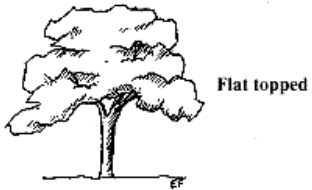
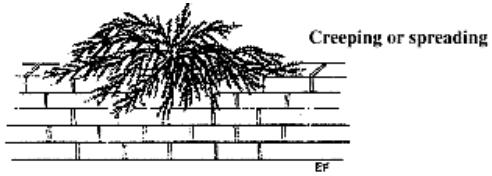
# maintenance

- Care, pruning, watering, repotting

# Plant Properties

- Size
- Form
- Habit
- Color
- texture
- Bark
- berries

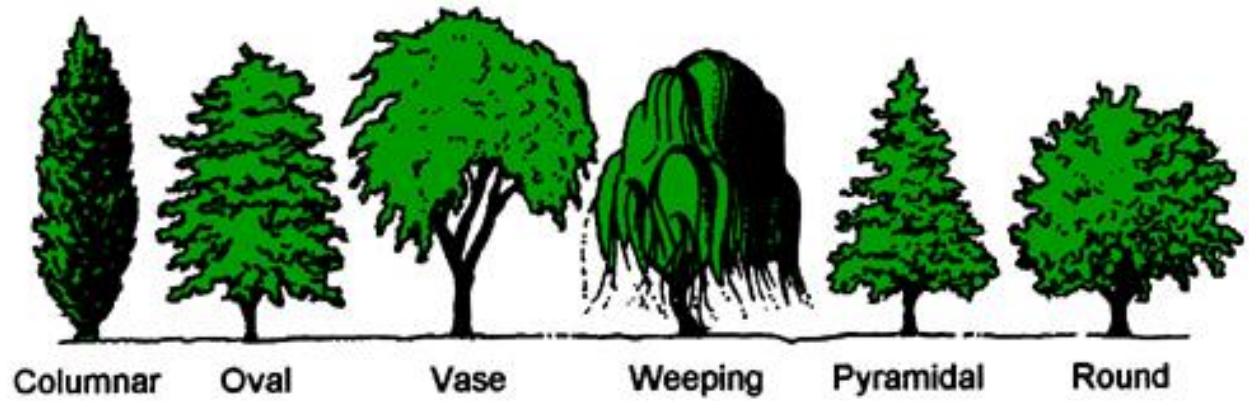
# Form



# habit

- An upright, reasonably large [more than (3-4) 5 metres tall] woody plant, usually with a single stem. **(trees)**
- An upright (or spreading horizontally and then becoming upright) multiple stemmed woody plant which is generally smaller than a tree (usually less than 5 metres tall). **ascending**
- A woody plant with branches spreading along the ground or lying flat on the ground, or spreading along the ground for most of its length but with tips turning upwards. **Prostrate**
- Woody or herbaceous plants with stems that are not self-supporting, but are climbing or straggling on some support. **Climbing, straggling**
- Herbs (or rarely shrubs) with a whorl of leaves (by contraction of stem internodes) at the base of the stem, or non-woody, non-climbing plants. **Rosette-forming or herbaceous (non-climbing)**





### Growth Habits



# texture





color









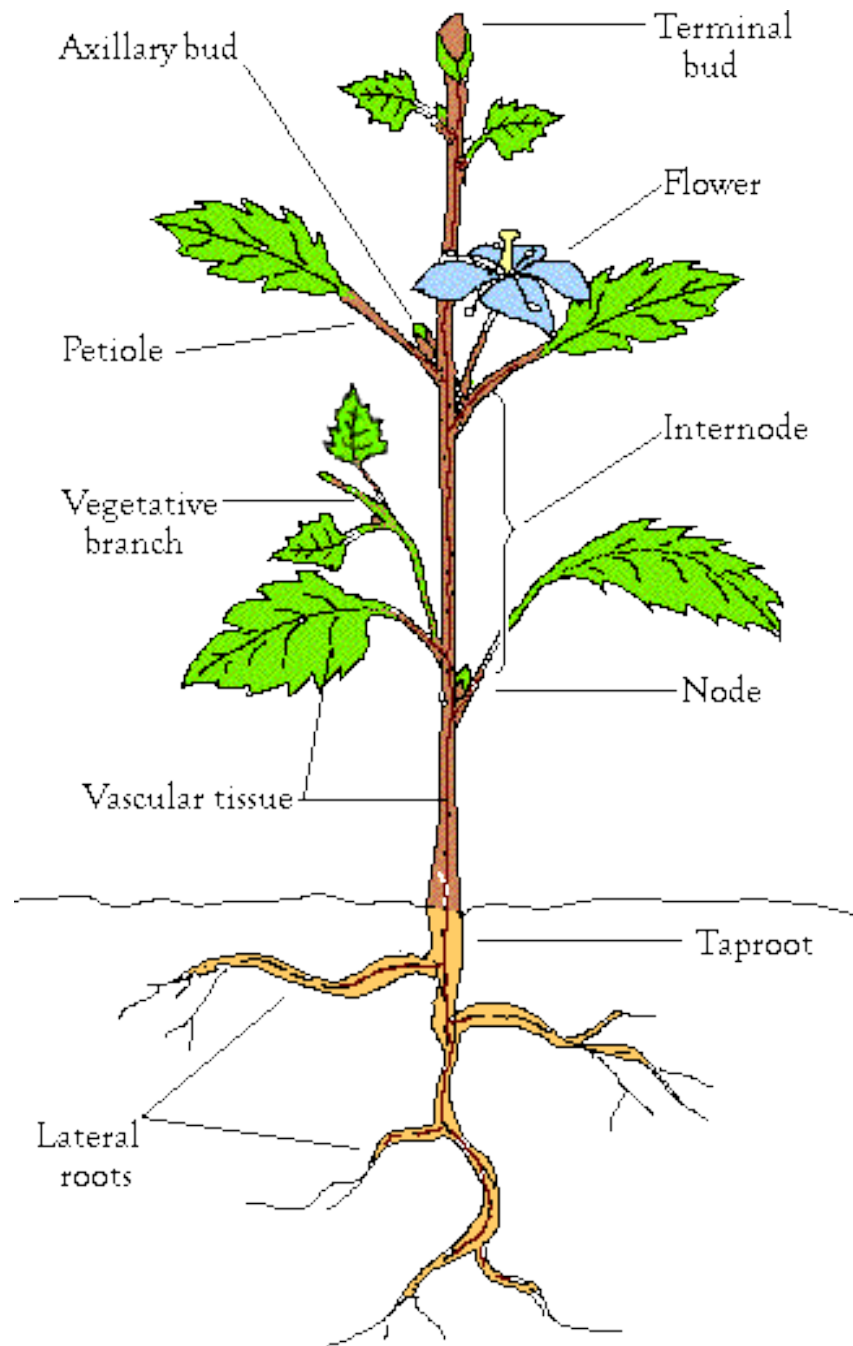


# berries



# Parts of plant

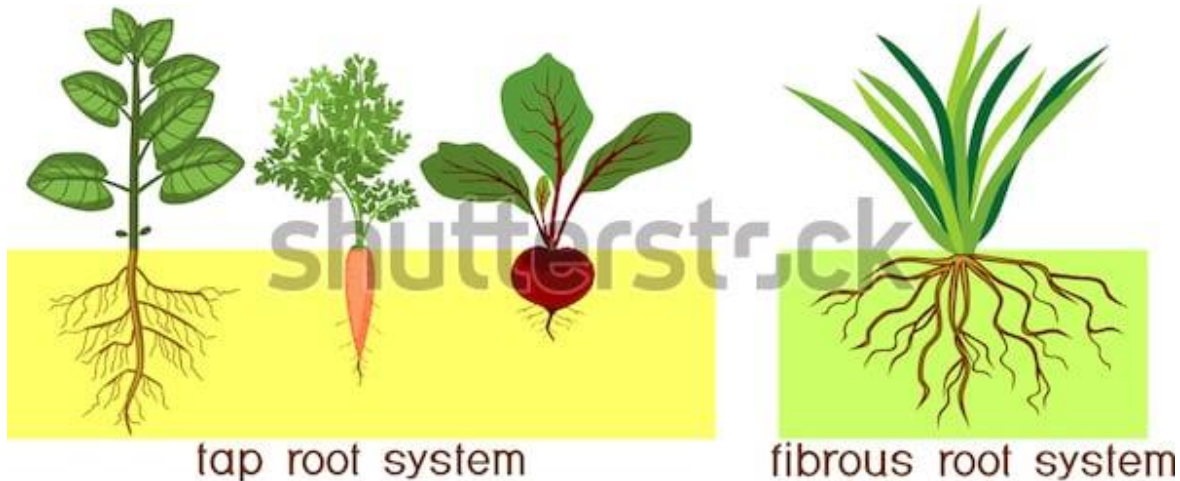
- Root
- Stem
- Branches and twigs
- Leaves
- Flowers
- Fruits
- seeds





# Roots

- Tap, Fibrous, Bulbs, Rhizomes
- Horizontal spread, vertical (deep)
- function



# stem

- function
- Bark texture



# Eucalyptus deglupta



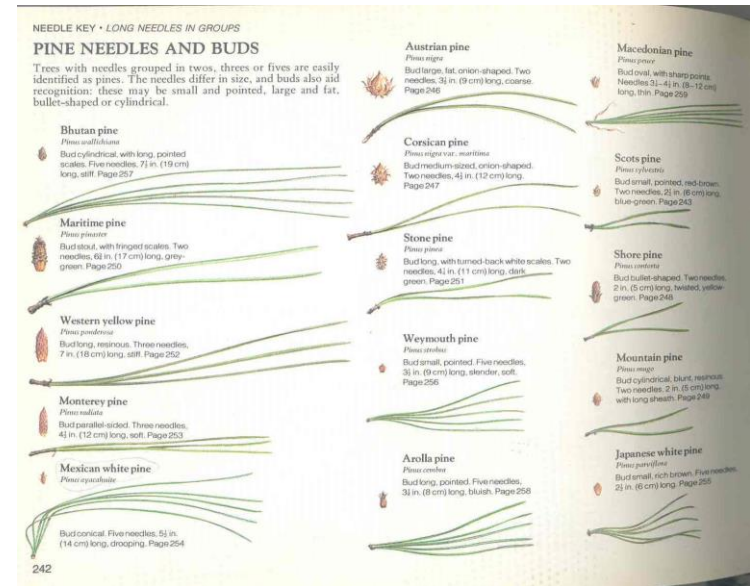








# leaves



branches





# Flowers

## Rosa sp.



# Pittosporum tobira



*Prunus amygdalus*  
*Amygdalus comunis*







**Wisteria**



fruits



# Prunus aviam

*Pyrus communis*



*Prunus aviam*



*Punica granatum*





# Ceratonia siliqua



### Round, hanging cones

Some of these cones have diamond-shaped, stalked cone scales. The remainder – all pine cones – have scales that are woody, thickened at the edges and often armed with prickles. They take two years to ripen, and some do not fall until long after the seed has been shed.



Corsican pine

#### Corsican pine

*Pinus nigra* var. *maritima*

Woody scales; ripens to grey-brown, 21–23 in. (6–7 cm). Page 247. Austrian pine, page 246, has similar cones.



Maritime pine

#### Maritime pine

*Pinus pinaster*

Woody scales; cone asymmetrical, with sharp prickle, ripens to shiny brown; persists on tree, 4 in. (10 cm). Page 250. Similar but larger cones on Monterey pine, page 253, and Western yellow pine, page 252.



Coast redwood

#### Coast redwood

*Sequoia sempervirens*

Scales diamond-shaped. Stalked, ripens to brown in one year. 3 in. (2 cm). Page 222



Shore pine

#### Shore pine

*Pinus contorta*

Woody scales; cones in whorls, 2 in. (5 cm). Page 248. Stone pine, p. 251, larger, with lined scales. Arolla pine, p. 258, and Japanese white pine, p. 255, also have small round cones.



Wellingtonia

#### Wellingtonia

*Sequoiadendron giganteum*

Scales diamond-shaped. Stalked, ripens to grey-brown in two years. Scales corky, depressed at centre, 3 in. (7.5 cm). Page 262



Scots pine

#### Scots pine

*Pinus sylvestris*

Woody scales; ripens to grey-brown, 2–2½ in. (5–6 cm). Page 243. Mountain pine, page 249, has similar cones.



Swamp cypress

#### Swamp cypress

*Taxodium distichum*

Few, diamond-shaped scales, tiny spines; turns purple, 1 in. (2.5 cm). Page 225. Dawn redwood, page 224, is similar.



# Viburnum tinus



# seeds







