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Specific pruning techniques:



Shrubs



Conifers



Vines

What is Pruning?

The selective removal of specific parts of the plant to benefit the whole plant

Pruning is NOT:

- > a way to compensate for inappropriate plant placement!



Plant placement

Consider the mature size of plants and available space before you plant!




Why Prune?

Remove dead, diseased or broken parts




Prune out winter injury

> suckers




Stimulate new wood

- > thinning
- > rejuvenation

Train a young plant



Rosa mulliganii (Before)



Later...

Enhance a characteristic-coppicing

- > From the French "to cut"
- > used to enhance leaf, stem effect



Shrub dogwood



Coppicing to enhance leaf size...



Cotinus coggygria (smokebush)

Develop unusual forms



espalier, bonsai

topiary

Size Control

short term only!



Why Prune at all?

Pruning is a stress on plants



March



June

Plant will grow unassisted to natural form



is that really desirable?

Holodiscus discolor (Oceanspray)

Timing of Pruning

Depends on:

1. Flowering habit

Blossoms on old wood



Viburnum plicatum

Blossoms on new wood



Phygelius

2. Objectives

- remove dead wood anytime



3. Rate of healing

- quickest response is just prior to beginning of new growth

4. Risk of sucker development

- greatest in winter/e. spring
- less problem in summer
- *Malus, Syringa*



5. Risk of winter injury

- *Rosa, Hebe, Salvia* etc.

Frequency of Pruning

1. Prune only as needed

- know what you want to achieve



2. Age of plant

- Young plants

3. Type of plant

- clipped hedges



4. Need for size control

- maybe not practical!

Most importantly: know what the pruning will do!



Know the plant and keep a good reference around...



- don't obsess about "rules"
- observe growth/flowering
- observe the response

Principles of Pruning

Growth of woody plants

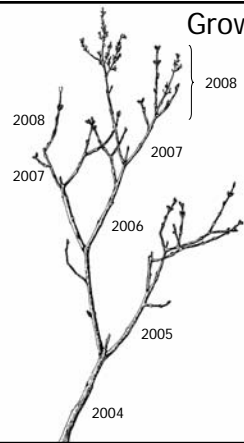
Directing growth

Principal pruning cuts

Adaptations to damage and disease



Growth habit of woody Plants



Lilac: *Syringa vulgaris*
Spring 2009

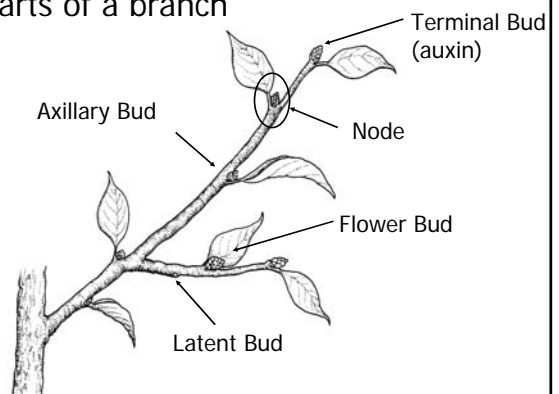
- Largest buds are at branch tips
- Not all buds develop
- twig diameter increases with age

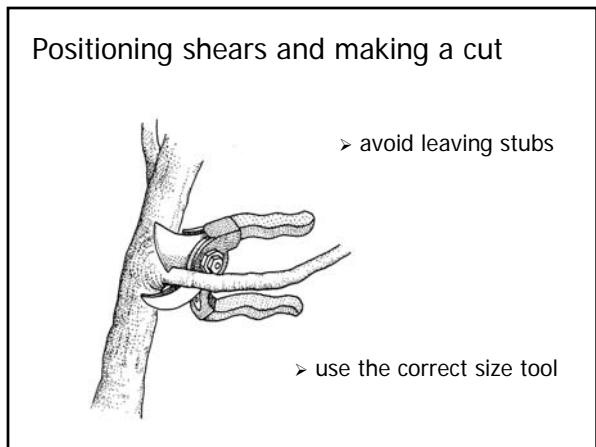
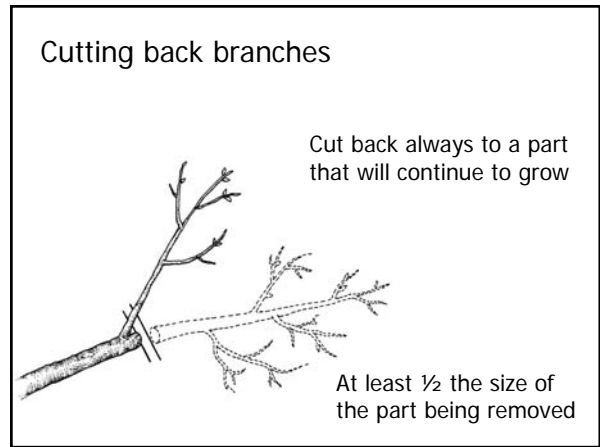
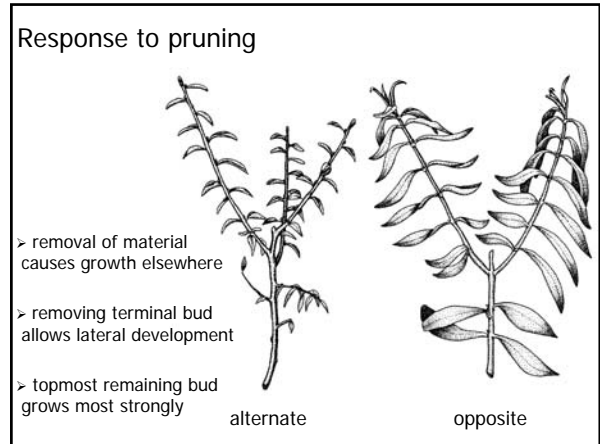
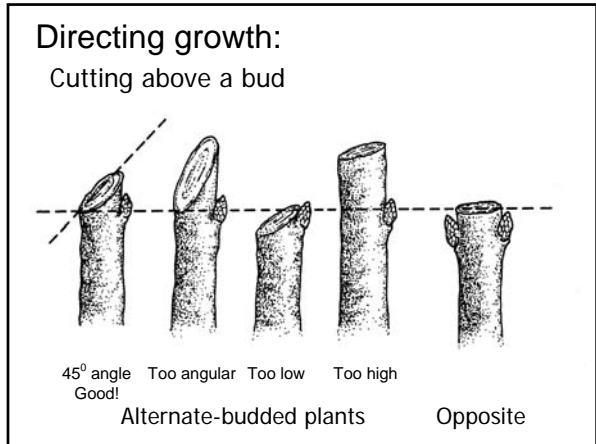


color change in wood

Ribes sanguineum

Parts of a branch





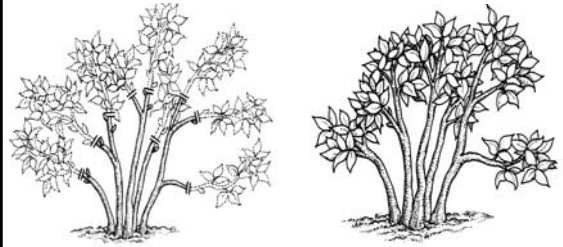
Thinning

- removal of entire stem or section of stem
- opens up the plant to admit light
- reduces overall height and promotes regrowth



Heading (selective)

- Cutting back to a bud or shoot
- Promotes branching, will "fill in" the plant



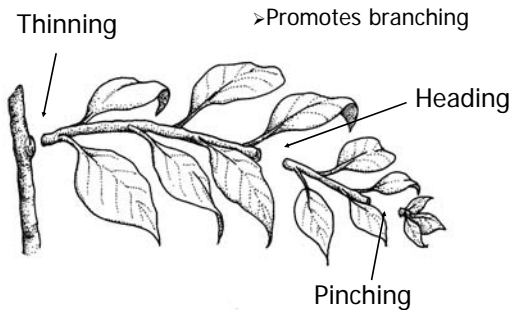
Shearing

- Non-selective heading: dense growth at branch tips
- Unnatural form, appropriate for formal hedges

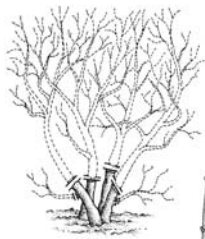


Pinching

- Specialized technique for succulent tissues
- Promotes branching



Renovation



➤ Cutting all canes back to near base to renew all growth

Very harsh technique: not appropriate for all plants!

Adaptations to damage and disease

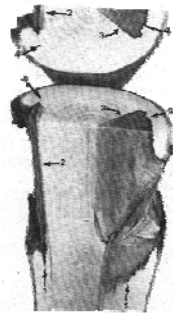


Plants have no “wound healing” process: healing in a sense of *replacing* or *repairing* injured tissues.

Plants *seal off* damaged tissue rather than *heal* it.

CODIT

Compartmentalization Of Decay In Trees



- Plants are highly ordered, *compartmented*
- Instead of healing, plants *compartmentalize* injured and infected tissues.

➤ callus tissue is produced on the wound margin



Wound paints and dressings

- evidence for use is inconclusive
- no given treatment fulfills all requirements
 1. Prevent decay
 2. Speed wound closure
 3. Inhibit insect or diseases

Pruning Shrubs

When and how to prune a shrub depends on...

1. Flowering habit

2. Growth habit



Calycanthus x raulstonii



Salix caprea var. *pendula*

Routine tasks:



> dead, diseased, damaged growth



> crowded branches



> reverted shoots



> removal of suckers



> deadheading

Determining time to prune flowering shrubs =flowering habit

1. Blooms on "old" wood: after flowering
2. Blooms on "new" wood: early spring



The issue is:
When does the shrub form the flower buds?

Distinguishing between "old" and "new" wood

Spring blooming shrubs develop buds in fall
> Tend to bloom early in season

Summer/fall blooming shrubs form buds as they grow
> Tend to bloom later in season



Chaenomeles-spring bloom



Spiraea japonica-summer bloom

Length of bloom period

Spring bloomers: 2 weeks?

Summer bloomers: often more than a month



Rhododendron



Fuchsia magellanica

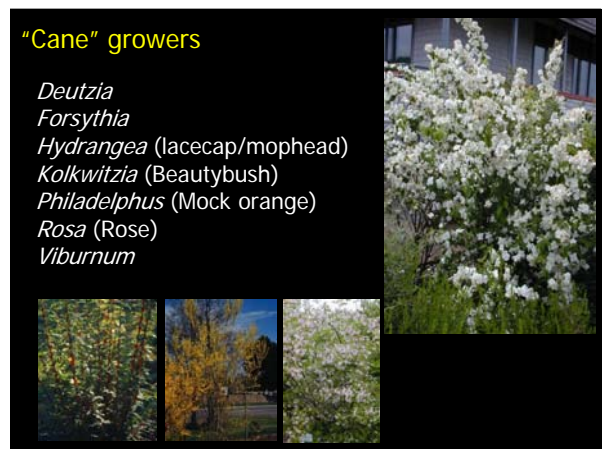
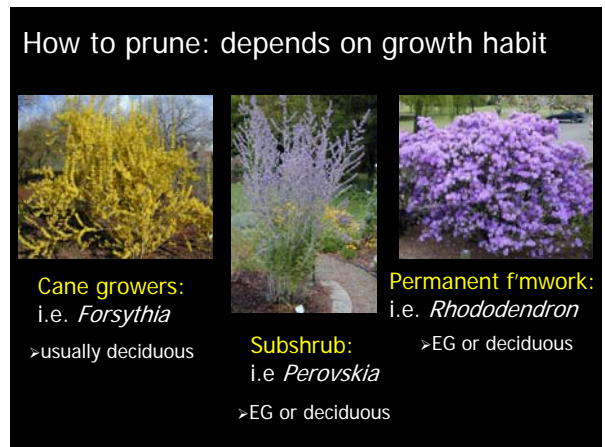
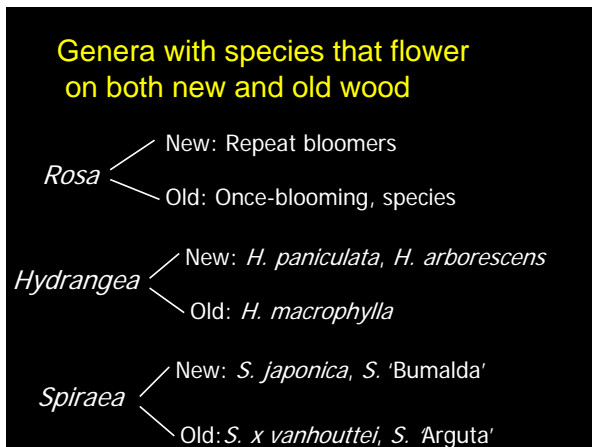
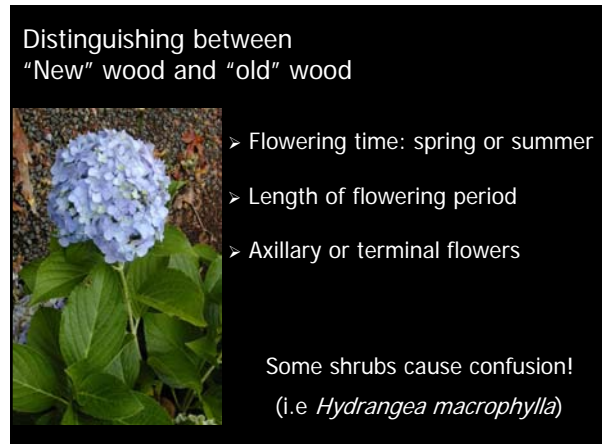
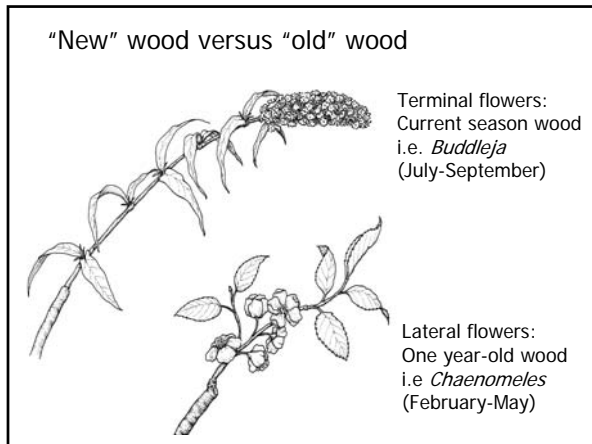
Flower type: terminal or axillary



Crabapple (*Malus*)-winter



Hydrangea paniculata-winter



Permanent framework

- Have a "tree-like" structure
- Do not renew themselves from the base
- Often are evergreen shrubs



Pieris japonica



Rosmarinus officinalis 'Arp'

Permanent Framework



- Ceanothus* (Wild lilac)
- Cistus* (Rockrose)
- Daphne*
- Hamamelis* (Witchhazel)
- Hebe*
- Hibiscus* (Rose of Sharon)
- Ilex* (Holly)
- Lavandula* (Lavender)
- Pieris* (Andromeda)
- Rhododendron* (and azalea)
- Rosmarinus* (Rosemary)

Some are deciduous...



Hamamelis (witchhazel)



Hibiscus syriacus
(Rose of Sharon)

Subshrubs

- Have a woody framework
- Produce flowers on new growth



Salvia microphylla



Phygelius 'Sensation'

Some examples of subshrubs



Penstemon spp.

- Artemisia* (Wormwood)
- Caryopteris* (Bluebeard)
- Ceratostigma* (Plumbago)
- Fuchsia magellanica* (etc)
- Gaura lindheimeri*
- Heptacodium* (7 Sons Plant)
- Hydrangea paniculata*
- Lavatera* (Tree mallow)
- Salvia* (Sage)
- Perovskia* (Russian sage)
- Penstemon*
- Phygelius* (Cape Fuchsia)
- Vitex* (Chaste tree)
- Zaushneria* (California Fuchsia)



Deutzia 'Pride of Rochester'

Pruning Cane growers

- Remove:
 - dead
 - damaged
 - crossing
 - twiggy growth
- Thin oldest canes
 - 1-2 per year



Another example...



- > Basal growth removed
- > Weak canes removed

Deutzia 'Pride of Rochester'




Shearing cane growers

Effects of topping canes (i.e. heading)




Viburnum opulus

Few flowers!




February April

