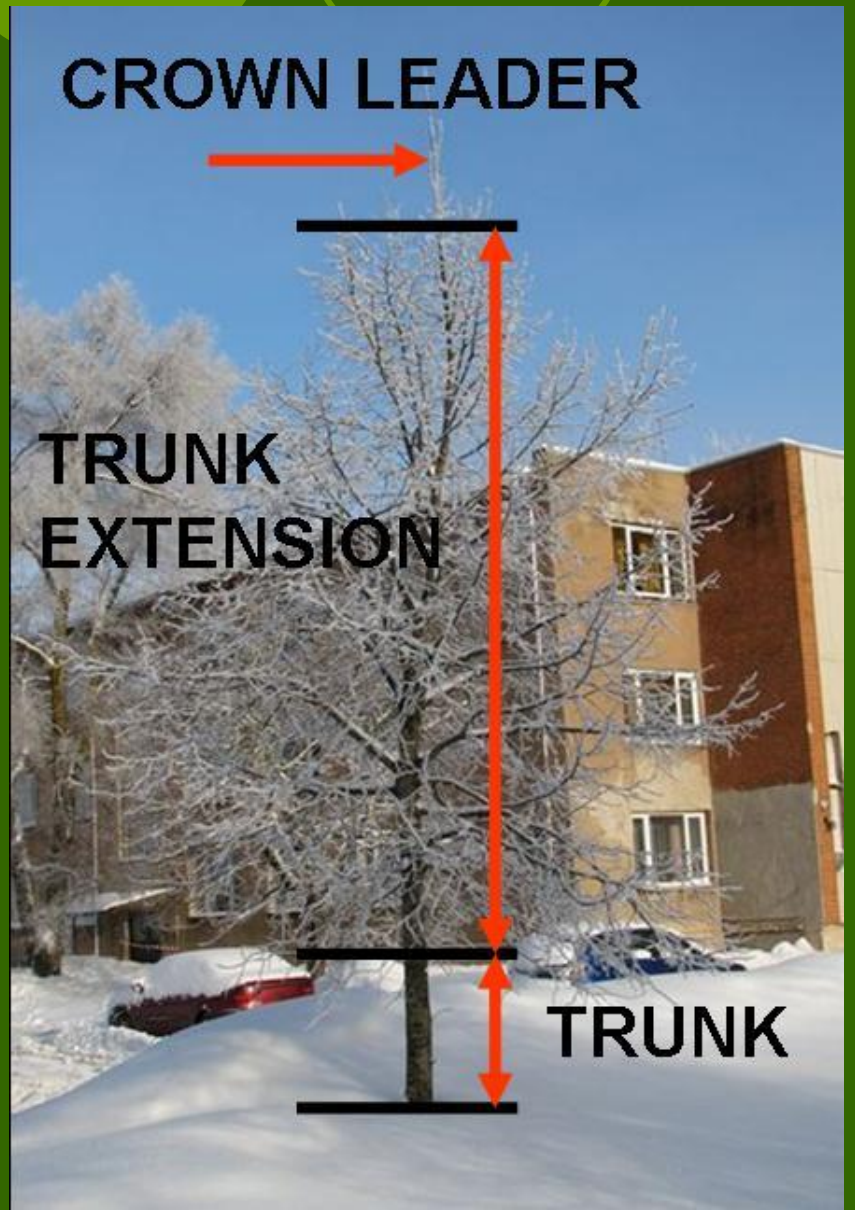
TREE BIOLOGY

TREE ANATOMY

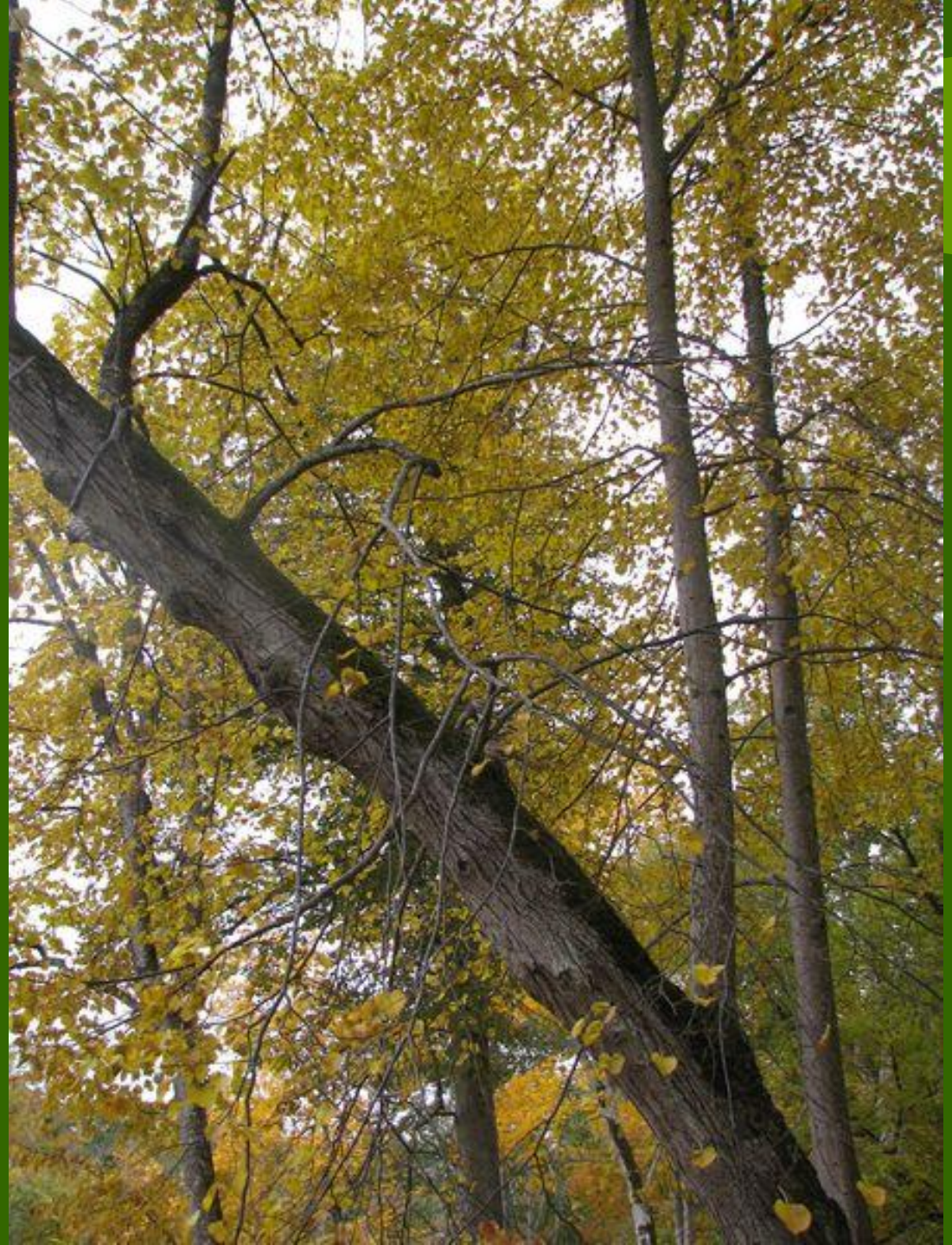
LIINA JÜRISOO
liina.jyrisoo@emu.ee

Eesti Maaülikool
Estonian University of Life Sciences

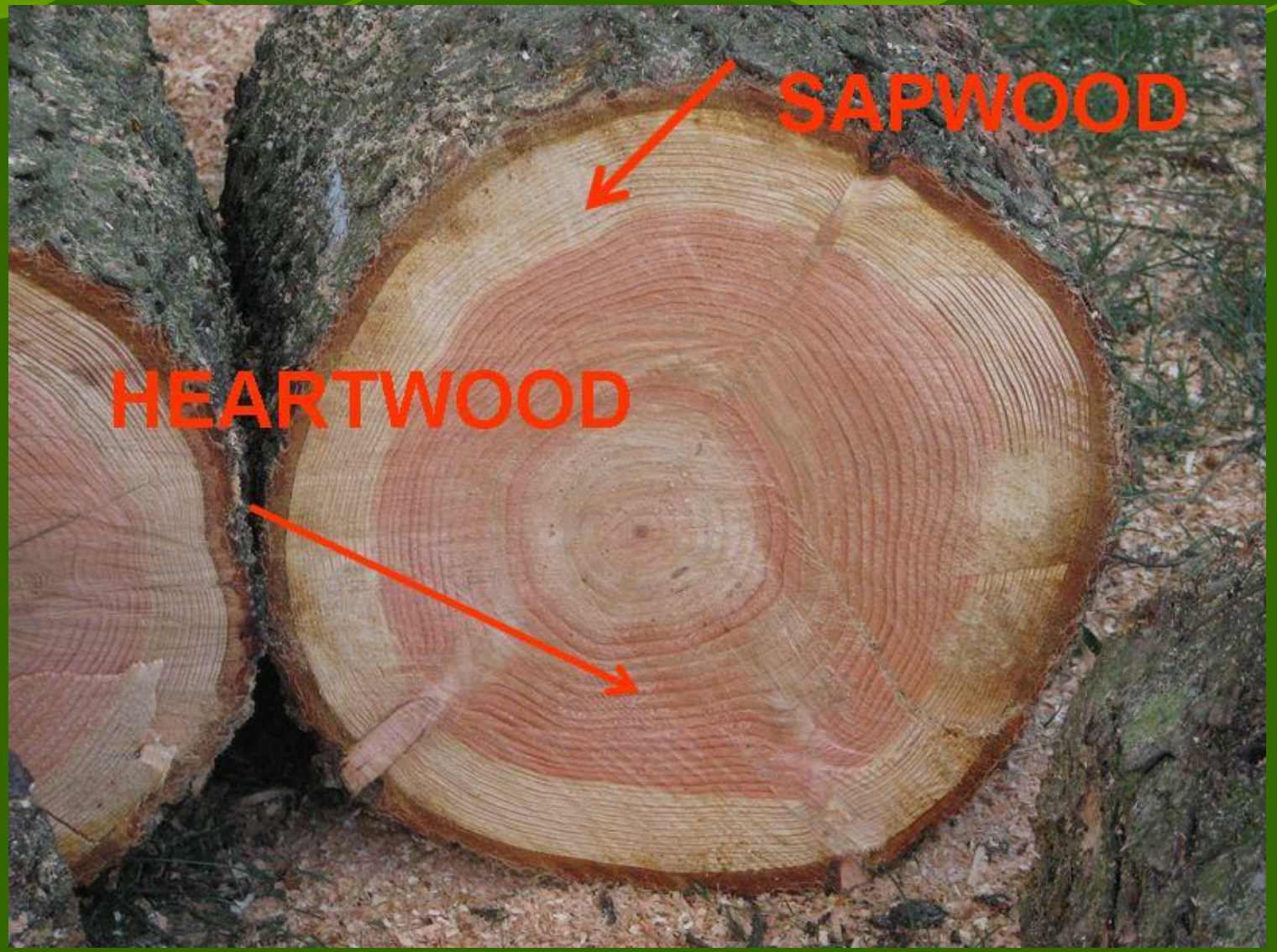
TRUNK



Trunk tries to grow straight up



Wood



BARK

Thin cork

Fagus sylvatica (Schwerin)

Thin cork

Thick cork

Salix (Räpina)

Larix (Lõhavere)

Why to avoid cork damaging while trimming or mowing?

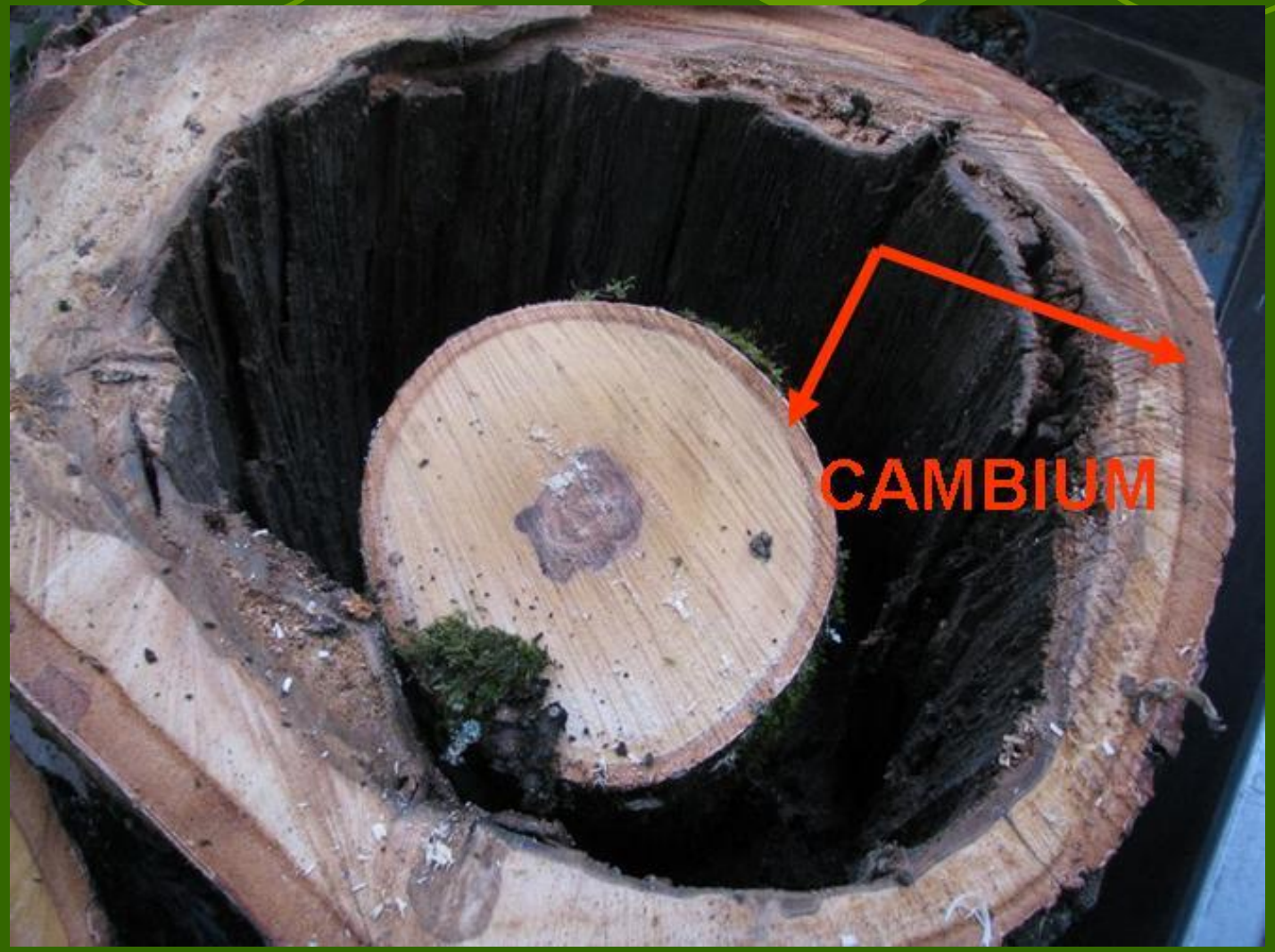
Apical Meristems

- Tree grows into height
- Roots also expand from tips

Apical bud

- if something happens to the bud, there will be two or more leaders

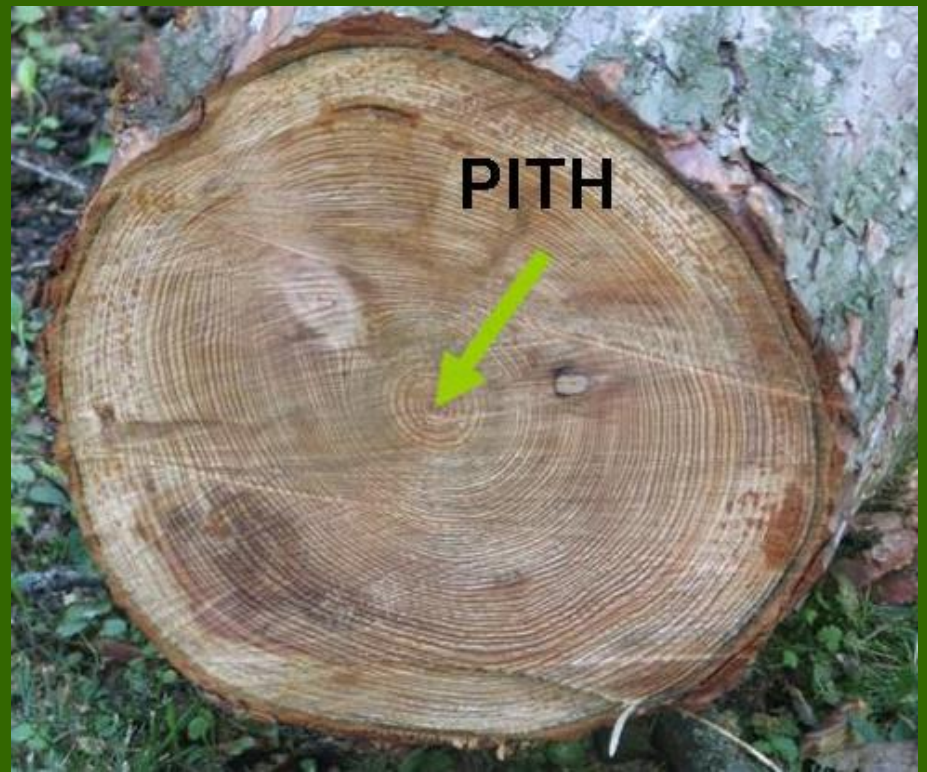
Cambium



Callus

Pith

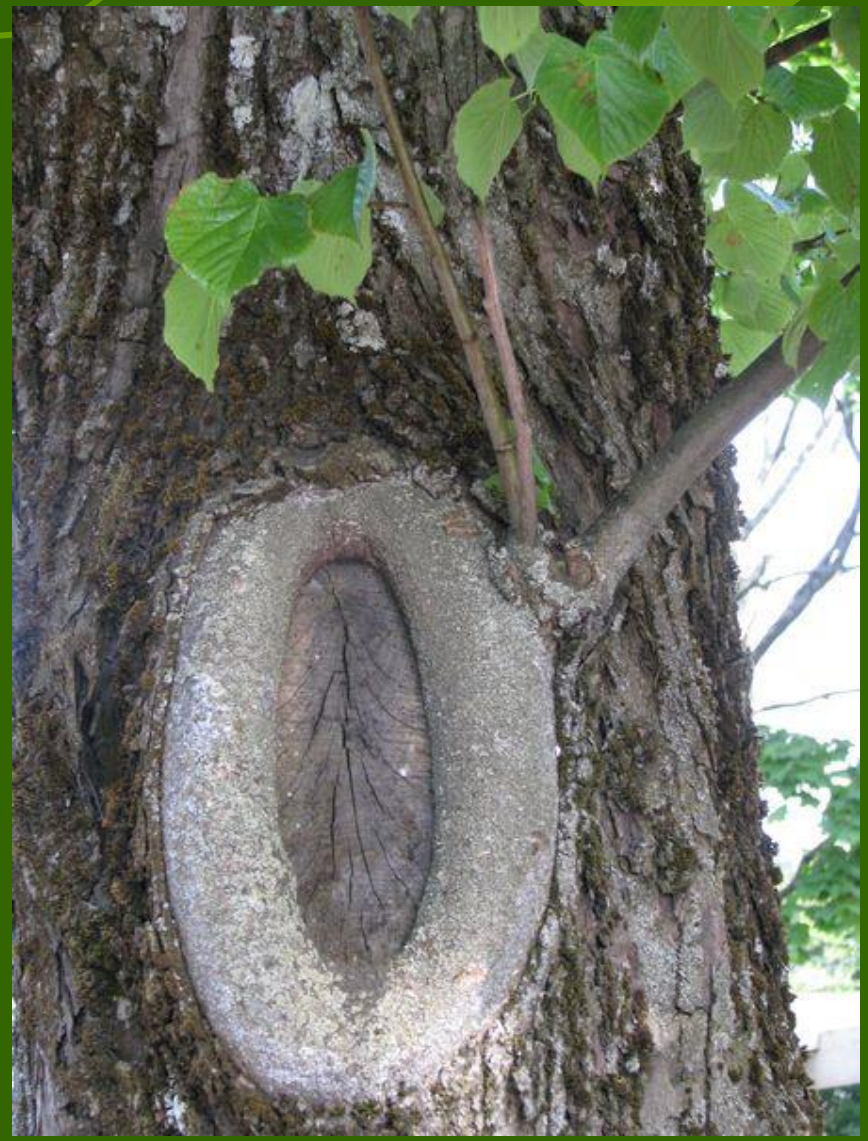
- middle core of the stem,
- in mature trees the pith is very thin
- it ends with apical bud
  - all the normally formed buds have a connection with a pith and this connection is very strong

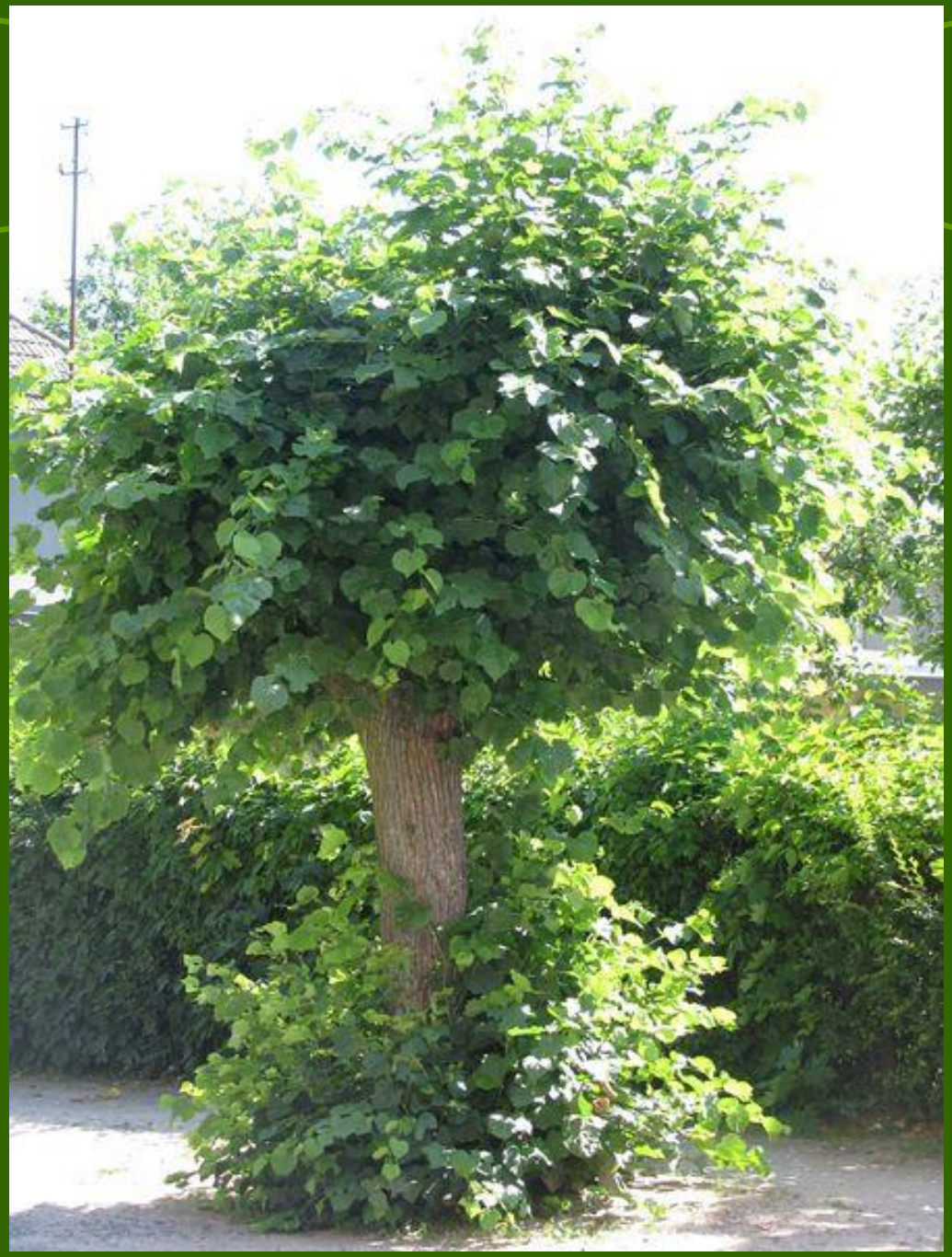


Epicormic buds

- under certain conditions, they develop into active shoots, such as when damage occurs to higher parts of the plant, or light levels are increased following removal of nearby plants
- in many woody species, but are absent from most conifers (except *Taxus*)

Adventitious buds

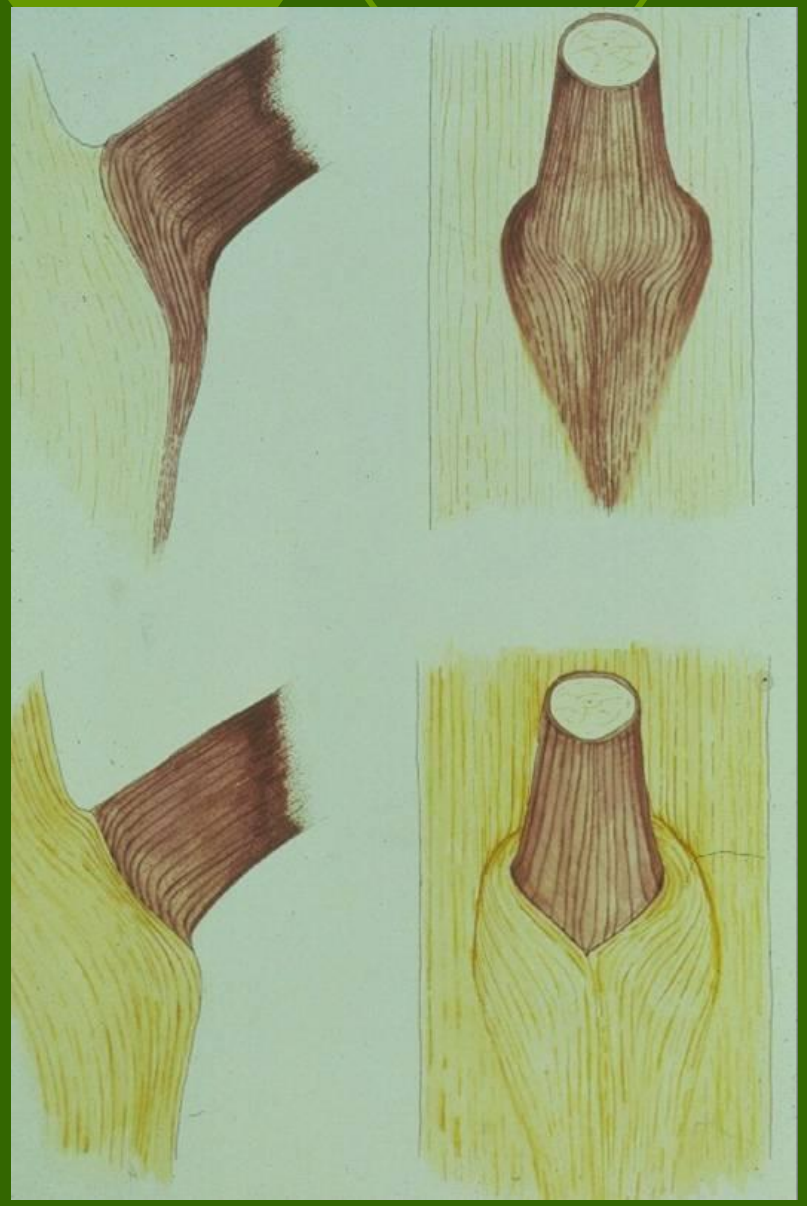




https://www.extension.purdue.edu/extmedia/FNR/FNR-534-W.pdf

POLLARDED TREE

BRANCH COLLAR



BRANCH COLLAR

BRANCH COLLAR

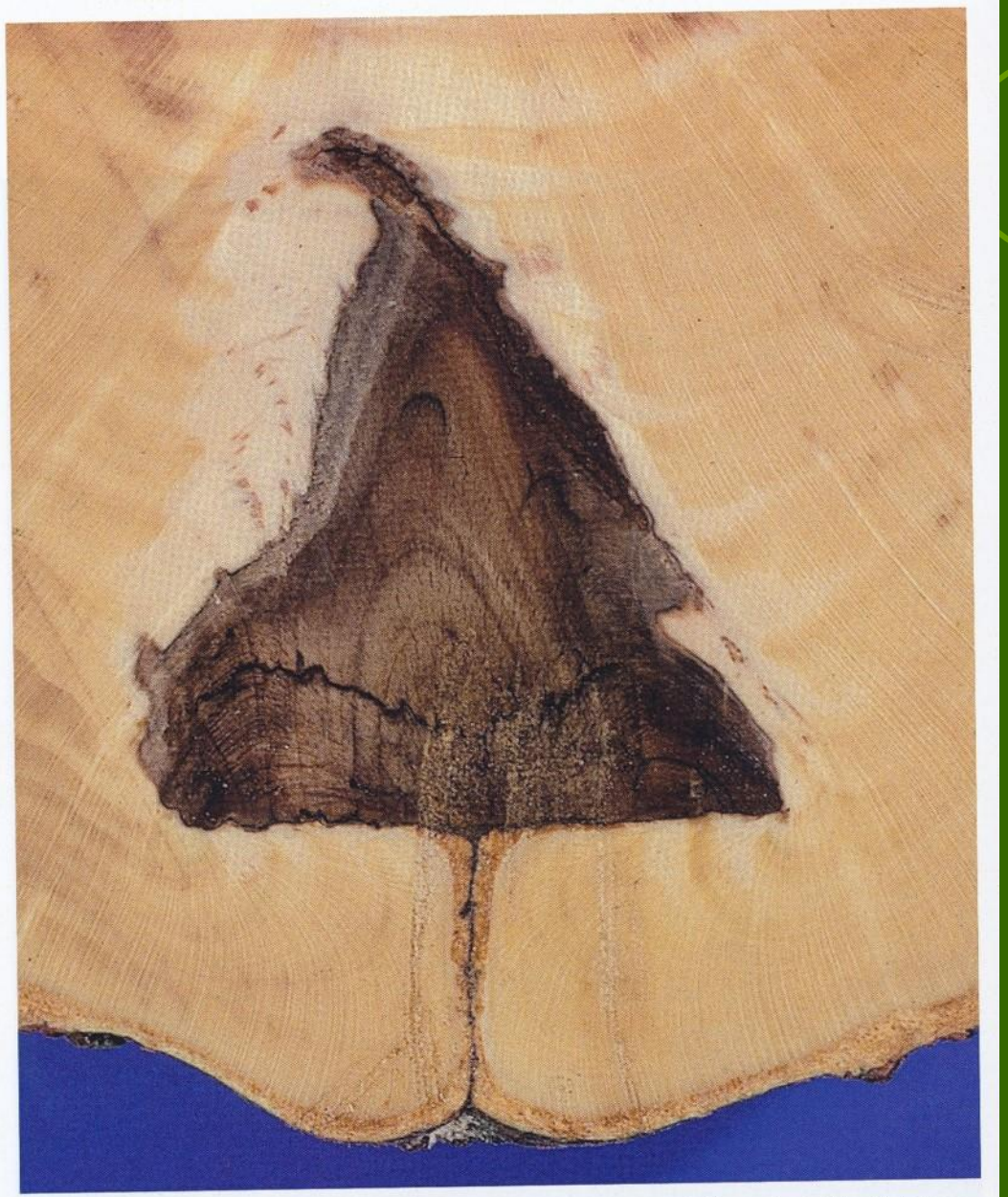
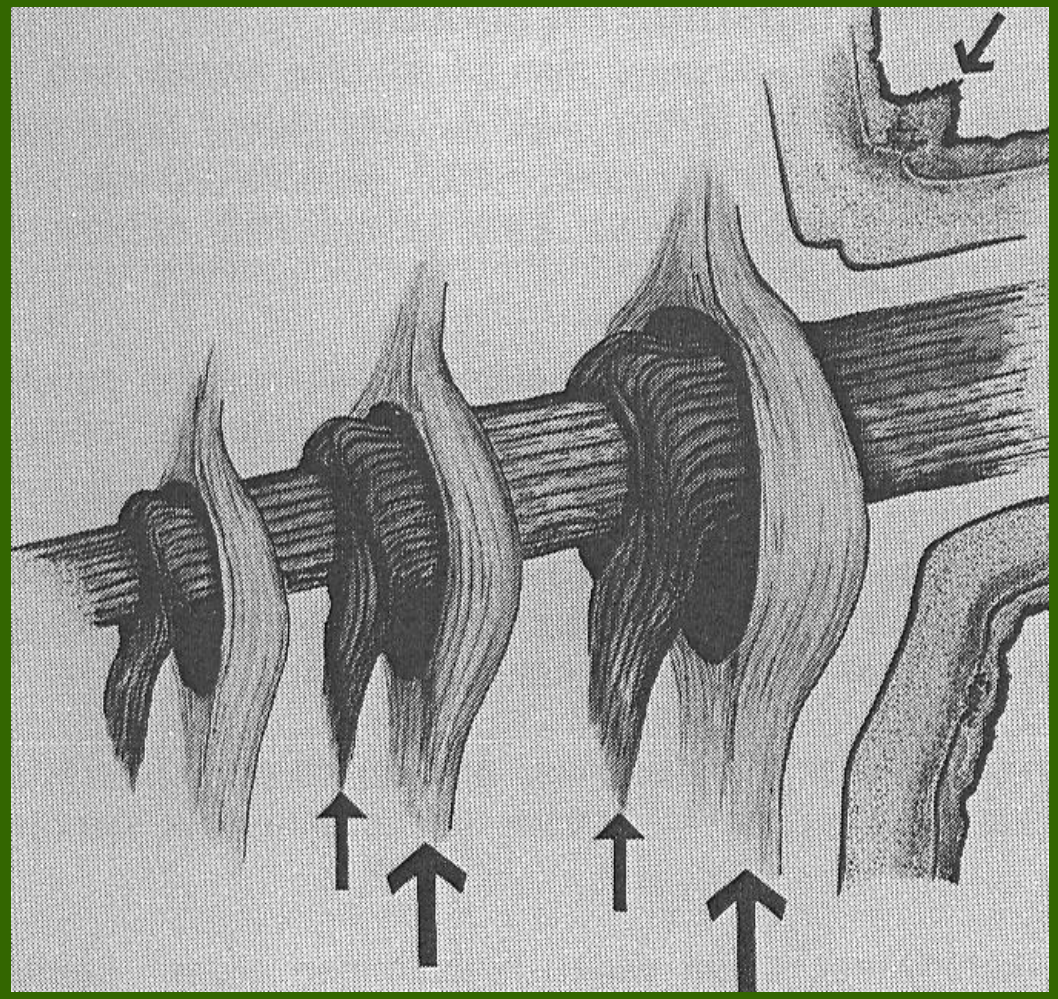


Fig. 59: The discolored tissue in the base of an old, dead branch (branch stub) which has been abandoned by the tree, compartmentalized by the boundary layer and completely encapsulated by the woundwood. As a result of this encapsulation, the fungus dies off. Encapsulation is the survival strategy of trees after injury.

BARK RIDGE

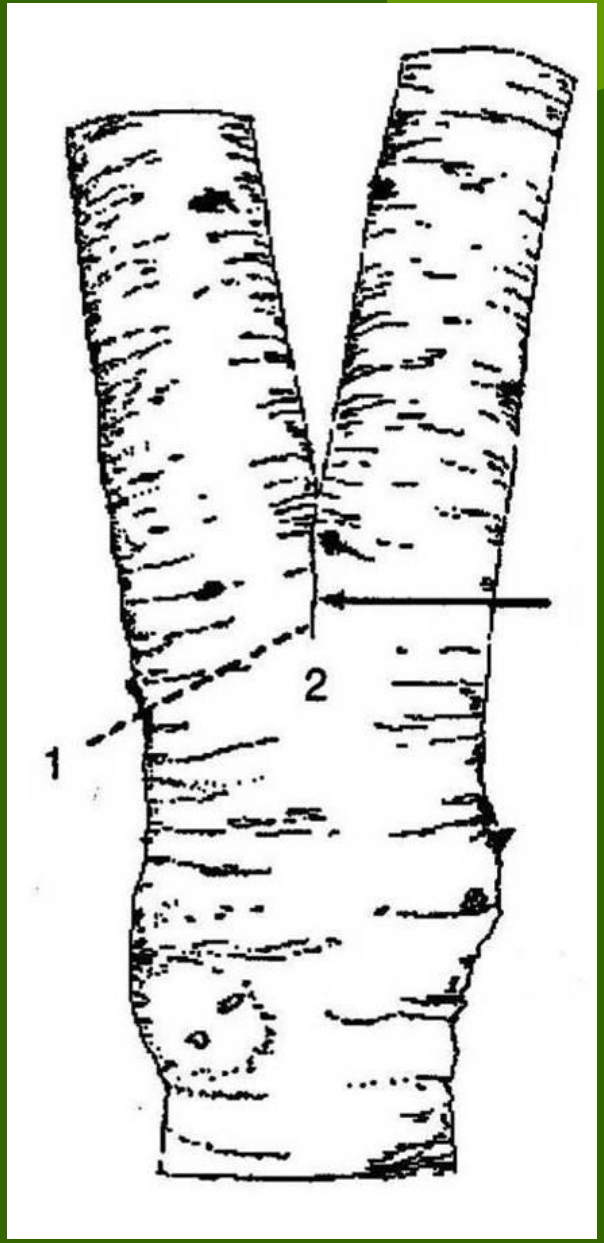


- when both parts of the tree thicken

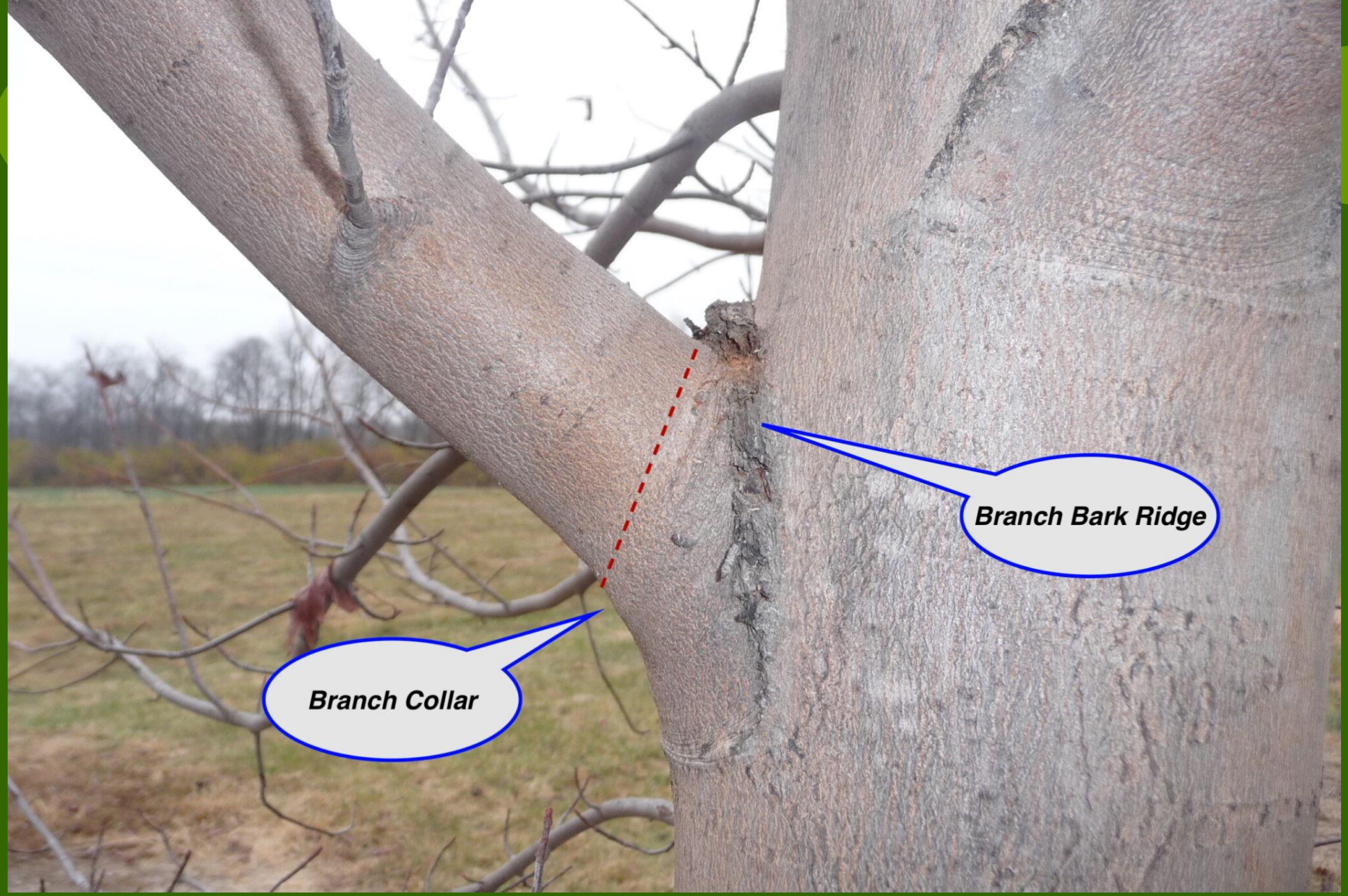
GOOD CONNECTION

BARK RIDGE

BARKRIDGE MISSING



WEAKLY LOCKED BRANCH



https://www.purduelandscapereport.org/article/branch-component-identification-for-better-pruning-cuts/