



# Injuries and defense mechanisms

Few sugar maples reach maturity without suffering mechanical injuries caused by natural events or human activities. For example, severe damage to trees from wind, snow or ice storms cannot be predicted or prevented. However, damage severity could be reduced by carefully selecting the sugarbush location.

## TYPES OF INJURIES

**INJURIES CAUSED BY NATURAL EVENTS**  
1998 ice storm damage (sugar maples).

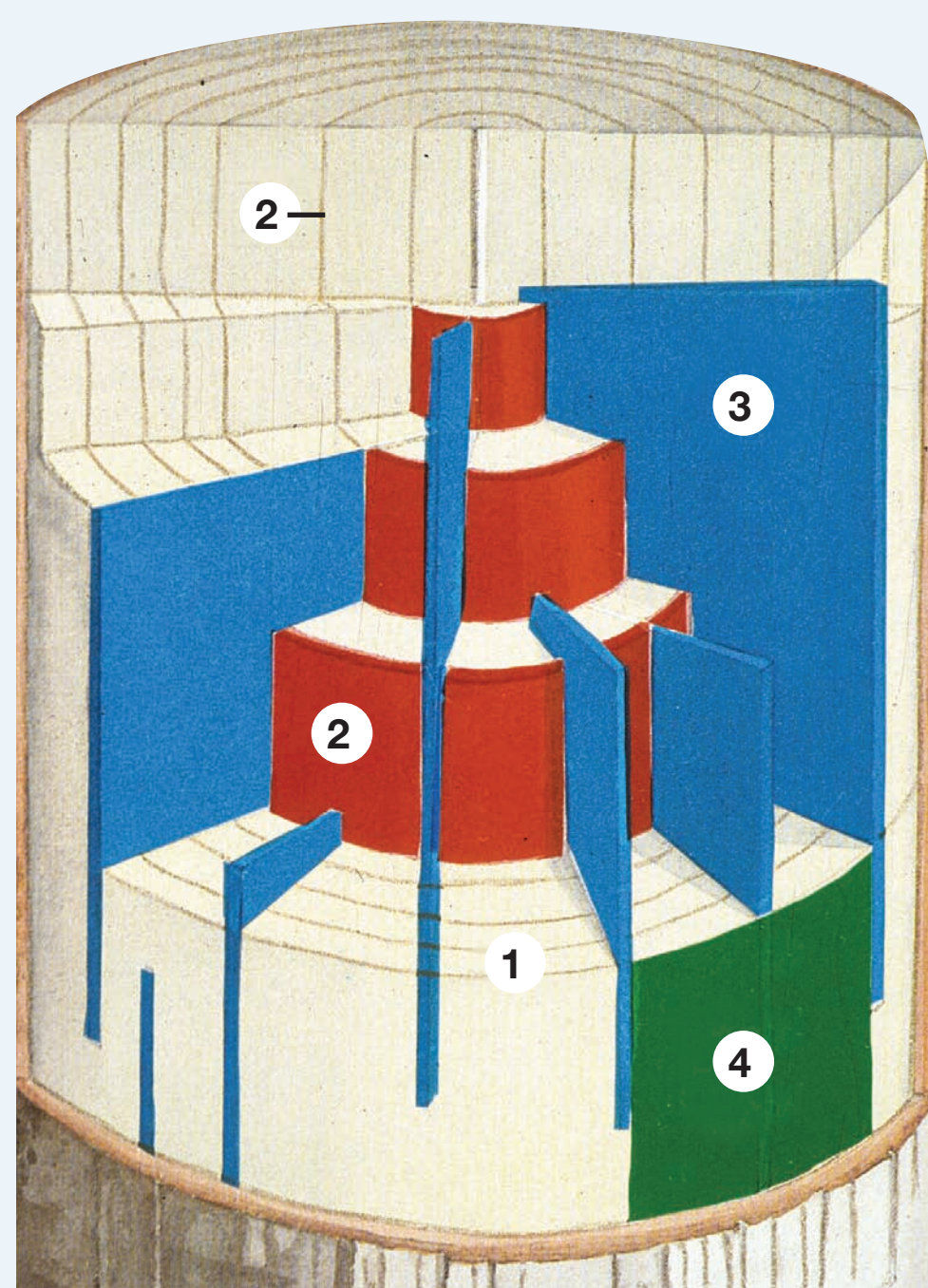


**INJURIES CAUSED BY HUMAN ACTIVITIES**  
Injury caused by a skidder (red pine).

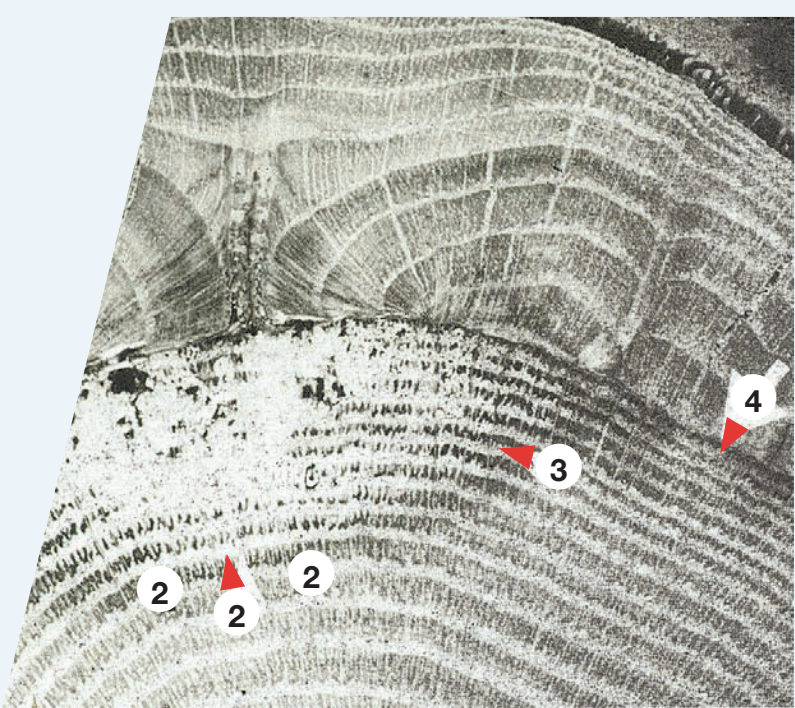


## DEFENSE MECHANISMS

**COMPARTMENTALIZATION**  
CODIT model. (Adapted from Shigo and Marx 1977)



**WOUND CLOSURE**  
Five years after damage: closed injury and compartmentalization of the white decayed wood (red oak).



## REACTION TO TAPPING

Overtapping (sugar maple). Some tapholes have breached compartmentalization barriers, leading to a more extensive area of discoloured wood.



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