HOW A TREE GROWS

CROWN

Trees increase each year in height and spread of branches by adding on a new growth of twigs.

Light and heat are necessary for chemical changes. The leaves prepare the food obtained from the air and the soil and give off moisture by transpiration.

The air supplies carbon, the principal food of the tree, which is taken in on the under surface of the leaves.

TRUNK

Heartwood (inactive) gives strength.

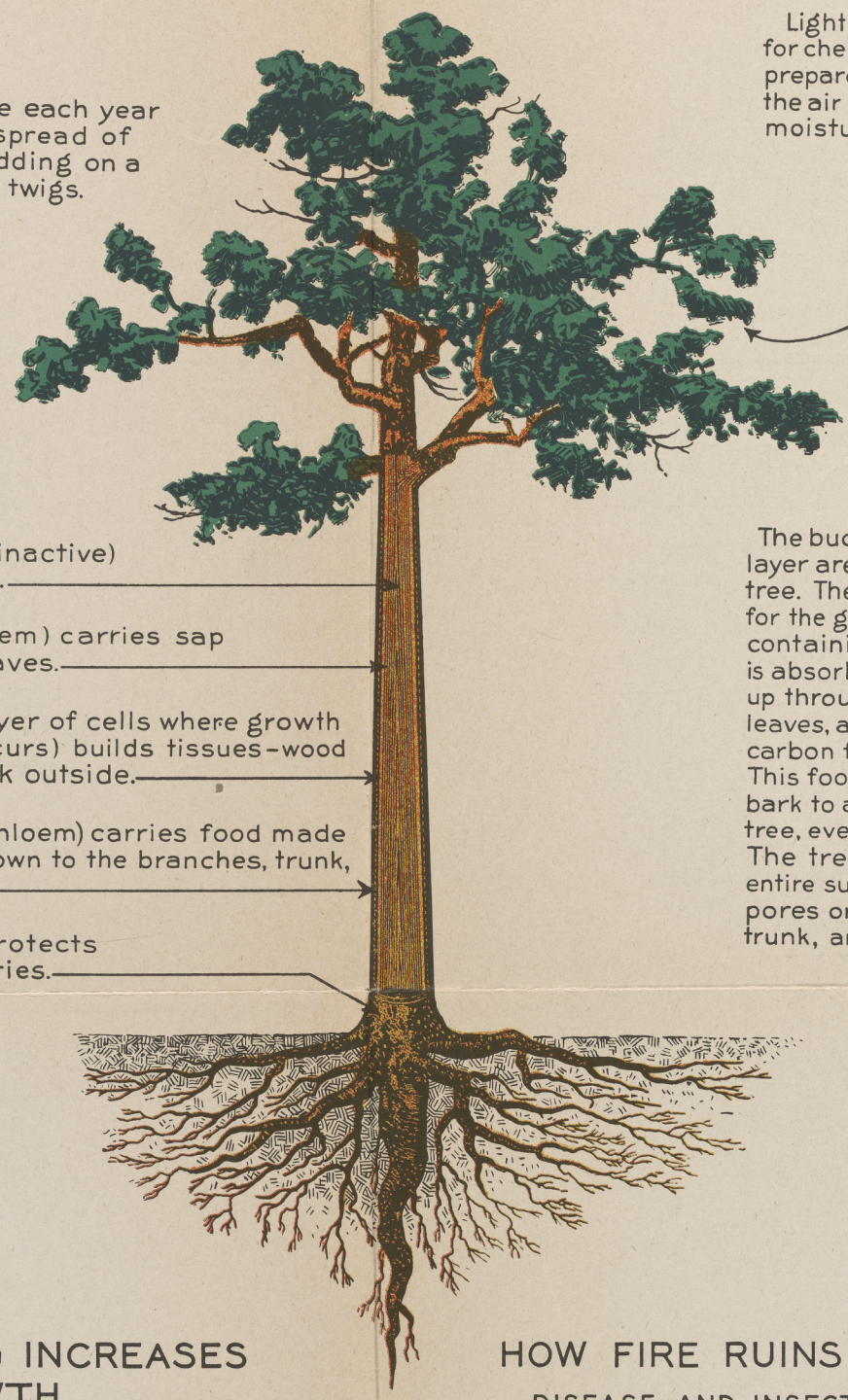
Sapwood (xylem) carries sap from root to leaves.

Cambium (layer of cells where growth in diameter occurs) builds tissues—wood inside and bark outside.

Inner bark (phloem) carries food made in the leaves down to the branches, trunk, and roots.

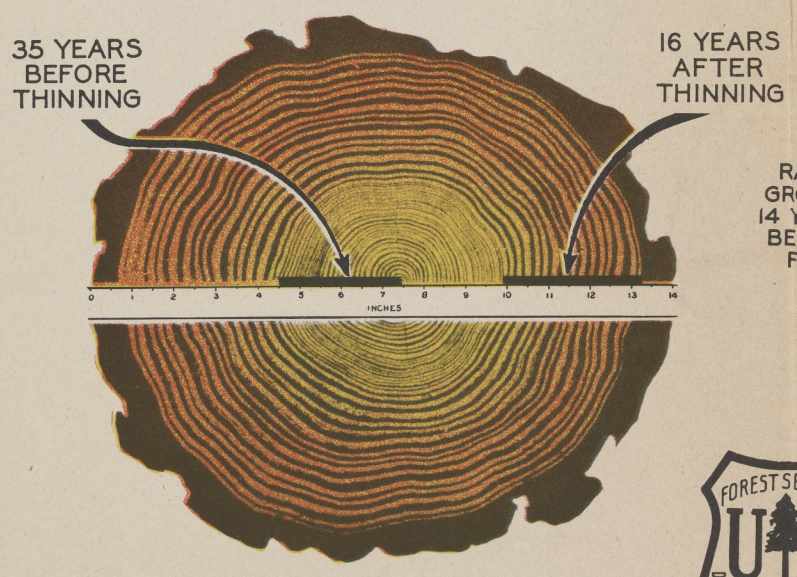
Outer bark protects tree from injuries.

The buds, root tips, and cambium layer are the growing parts of the tree. The leaves manufacture food for the growing processes. Water, containing minerals in solution, is absorbed by the roots, carried up through the sapwood to the leaves, and is there combined with carbon from the air to make food This food is carried by the inner bark to all growing parts of the tree, even down to the root tips. The tree takes in oxygen over its entire surface through breathing pores on leaves, twigs, branches, trunk, and roots.



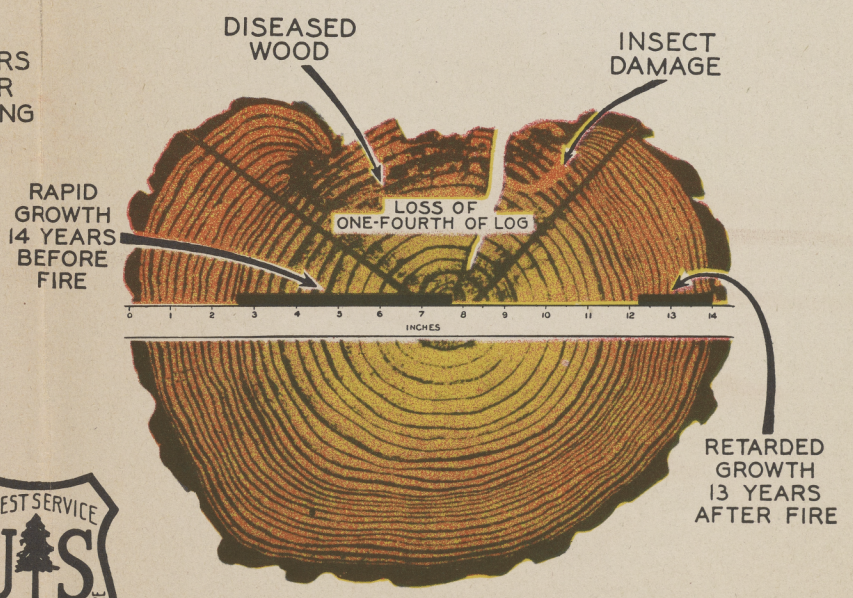
ROOTS

HOW THINNING INCREASES GROWTH



HOW FIRE RUINS TIMBER

DISEASE AND INSECTS ENTER THROUGH FIRE SCARS



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