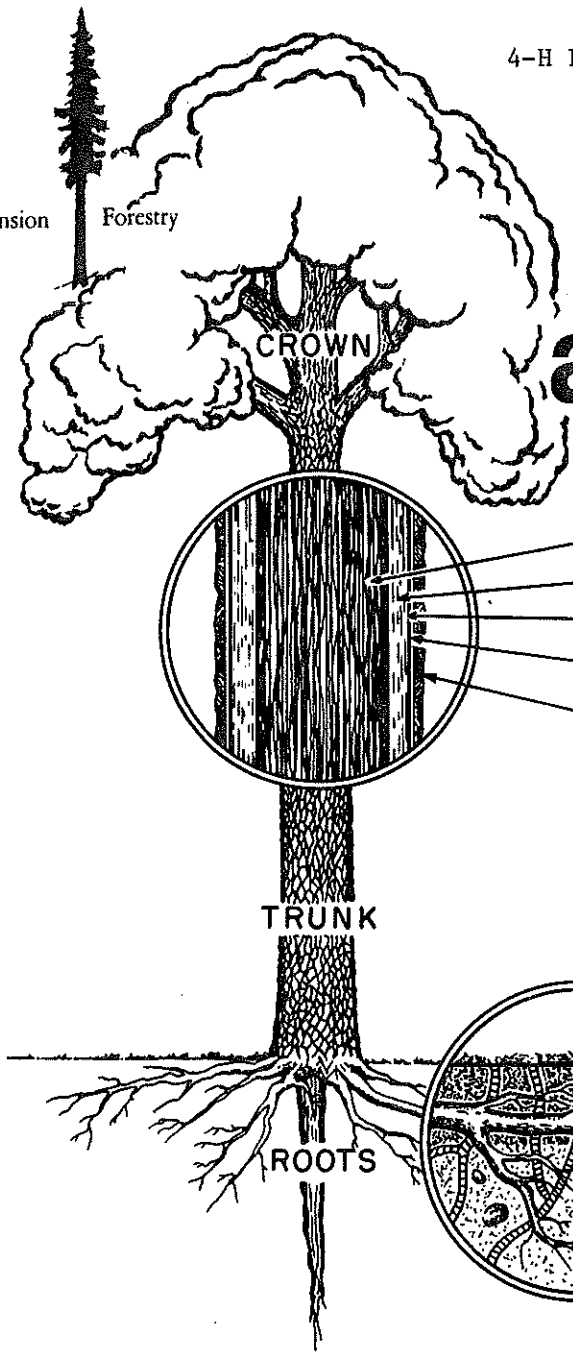


Extension Forestry

The Tree and the Soil



HEARTWOOD (INACTIVE) GIVES STRENGTH.

SAPWOOD CARRIES SAP FROM ROOT TO LEAVES.

CAMBIUM (MICROSCOPIC) BUILDS THE CELLS.

INNER BARK CARRIES PREPARED FOOD FROM LEAVES TO CAMBIUM LAYER.

OUTER BARK PROTECTS TREE FROM INJURIES.

ENRICHED SOIL LAYER, SOURCE OF MUCH OF THE TREE'S FOOD. THE HOME OF EARTHWORMS, WHICH LEAVE MANY CHANNELS FOR WATER AND AIR TO ENTER THE SOIL.

NATURAL MULCH OF LEAVES (FOREST LITTER) PROTECTS THE SURFACE FROM DRYING AND ERODING.

DECOMPOSING LAYER (FOREST HUMUS) INHABITED BY BENEFICIAL INSECTS.

SUBSOIL, COMPOSED OF SOIL PARTICLES AND PARENT MATERIAL. THE DEEP ROOTS FIND THEIR HOME HERE, WHERE THEY ABSORB WATER AND ANCHOR THE TREE FIRMLY IN PLACE.

INSECT PASSAGES THROUGHOUT THE SOIL.

The buds, root tips, and cambium layer are the growing parts of the tree. Water containing a small quantity of minerals in solution is absorbed by the roots, carried up through the sapwood to the leaves, and 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.

It is permeated by rodent burrows, and angle-worm and insect passages. These allow air and moisture ready access to the feeding roots. The roots in turn help hold soil in place, thus helping to prevent erosion.

Natural forest soil is loose and mellow.

Loose and mellow forest soils also allow rain water and water from melting snows to seep into underground reservoirs. This water is later released into springs, small streams, rivers, and lakes.



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