

THE AGE OF TREES

If you look at a cross section of a tree trunk, you will see that it is marked by a series of concentric rings.

Roughly, these rings tell the tree's age. Each growing season, a tree adds a layer of new wood to its girth. During the cold months, when the sap ceases to flow, growth is temporarily halted and the tree rests. Thus the rings are clearly marked. By counting the rings, an expert can arrive at a reasonably accurate estimate of the tree's age.

When a tree trunk is sawed up into lengths of lumber, the pattern of the rings forms the "grain" of the wood.

The growth rings of very old trees can also tell us much about weather conditions in long-ago times. In periods of great drought, the rings do not grow

as thick as in seasons when rainfall is plentiful. From that fact, scientific historians can piece together many secrets of the long-dead past. One of the most dramatic instances of this tree-ring history-book concerns the ancient cliff dwellers of southern Colorado.

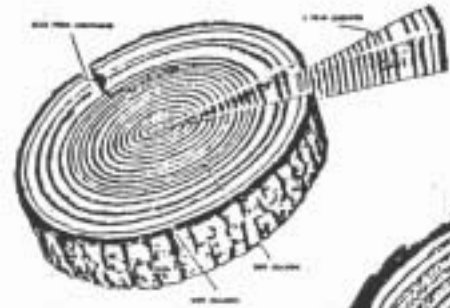
About two thousand years ago, the cliff-dwelling Indians built villages high up on the sheer sides of canyon walls. In those days, the countryside of that part of Colorado was considerably greener than it is now, with sufficient rainfall to make agriculture possible. The Indians cultivated thriving farms on the tops of the mesas above their cliff towns. They also pastured their flocks of turkeys and goats there.

Then, in about the year 1276, more than two centuries before Columbus landed on the shores of the New World, a devastating drought struck the area. The crops withered and died. Grass

dried up, and the wild game left the country. Springs went dry, and the rivers that had cut out the canyons ceased to flow.

This period of drought and famine lasted for twenty-four years, and during this interval, the Indians abandoned their cliffside homes and migrated to new and more hospitable lands.

How can scientists be so sure of these dates and events? By a careful study of the growth rings of the ancient trees that survived!



age of tree



35 years' growth

16 years' growth

Annual rings indicate growth (normally one ring per year). Width of the rings varies from year to year with the climate. Dry seasons produce narrow rings; wet seasons, broad rings. Based on this knowledge, one can not only approximate the age of the tree, but can also draw conclusions about the weather and other natural phenomena that influenced growth.

How can you tell the age of a tree?

How old is each tree? A _____ B _____ C _____

How do you know this?

Where do the rings come from?

How come all the rings are not the same distance apart?