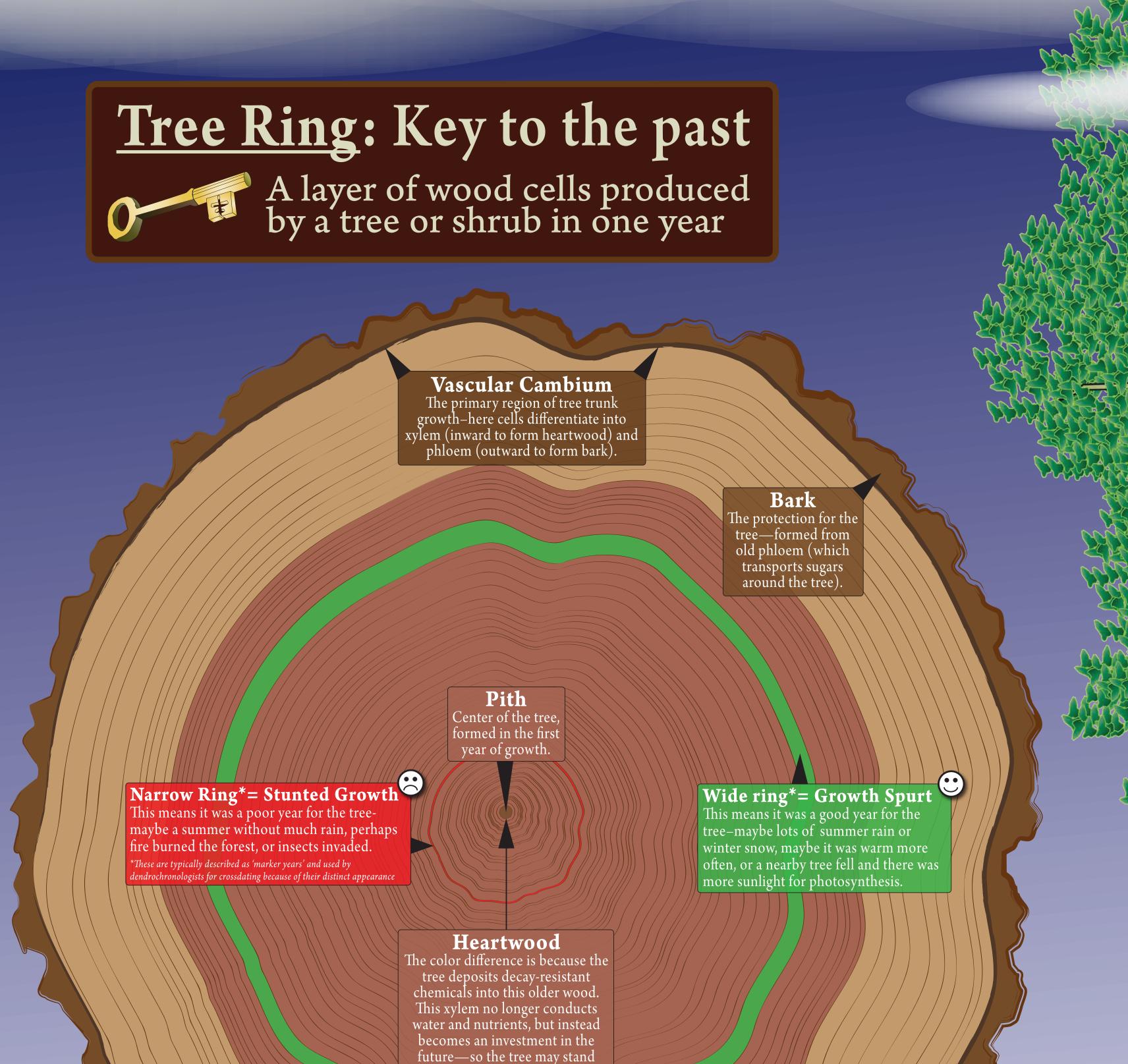
## A Redwood Secret Unlocking History

## Dendrochronology

 $\frac{\text{dendron} = \text{tree}}{\text{chronos} = \text{time}} \left( \frac{1 \text{V}}{\text{dendro-kra-nola-je}} \right)$ 

a method of scientific dating based on the analysis of tree ring patterns



increment borer: Is an auger-like tool with a hollow shaft that is twisted into the trunk of a tree. This allows scientists to extract an increment core (or tree core) with which they can crossdate trees handle with minimal injury.

strong and tall for many years.

**Sapwood**Is the living xylem—which conducts wat

Science Focus
tools of the trade

auger
extractor tray

## What can we learn from tree ring data?

- What past climates were like (hot, dry, wet, cold)
- When fires occurred (based on burn scars)
- Forest disturbances (insect infestations or major storms)

With this information, scientist are recreating a tree's growth history over time—thus estimating the age of these ancient beings!

## Crossdating An Example

Crossdating is like patching together panoramic photos but instead scientists use tree cores. They are able to assign each individual tree ring an exact year of formation by matching patterns between cores from the same tree or between trees from different locations

