

Barking up the Right Tree!

By Jenna Poole

Many Irish trees are easily recognised by their bark, especially in winter when they have lost their leaves and fruit. Cherry trees tend to have very shiny bark that is a deep red-brown. This bark is very thin and peels off in horizontal strips when new bark is produced underneath. Birch bark is also very thin and papery in texture, and that of the Silver birch is a distinctive silvery-white with deep, diamond-shaped, black markings as the tree ages.

Beech, which is not native to Ireland but is widely planted in gardens and parks, has a very smooth, silvery-grey bark. It has very few imperfections but is often covered in green dusty algae (a type of fungi). Another planted tree of parks and gardens is the Sweet chestnut, whose trunk has a fantastic twisted effect where the bark forms in deep, spiral grooves.

Perhaps Ireland's most well known tree, the Oak, has a classic grey bark with cracks formed in rectangular shapes as it grows wider and larger. Most conifers, such as the Scot's pine and Norway spruce, also have cracked and flaky barks, but they tend to be a bright red-brown to dark brown.

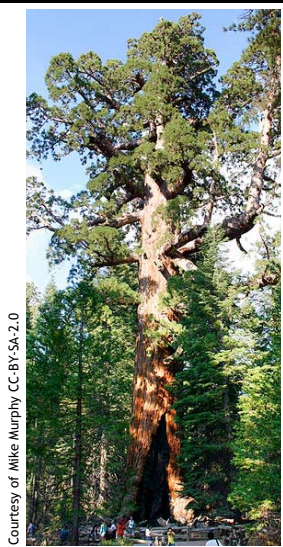


Melaleuca quinquenervia, one of the 'paperbark' trees.

The amazing fireproof bark!

The bark of the giant Redwoods on the West coast of North America is believed to be completely fireproof. These phenomenal trees grow to be almost 100m tall and around 10m in diameter! Their bark can be as much as 60 cm thick and helps protect them from forest fires that occur in the region.

"Grizzly Giant" Giant sequoia (redwood)
in Yosemite National Park, USA



Courtesy of Mike Murphy CC-BY-SA-2.0

What happens if bark is damaged?



Due to the protective nature of bark, any damage caused to it can be fatal for the tree or shrub. Many plantations have to be fenced off to protect the trees from grazing deer and rabbits, which as well as eating the young leaves can also strip a tree of its bark. That is why you may have seen freshly planted trees

with protective plastic tubes around the base.

Other organisms take advantage of already weak trees and cause further damage by entering underneath the protective bark layer. For example, Dutch elm disease, responsible for the death of thousands of Elm trees in Ireland and Britain, is spread by a species of beetle that burrows under the bark exposing the sensitive inner layers.

Uses of bark

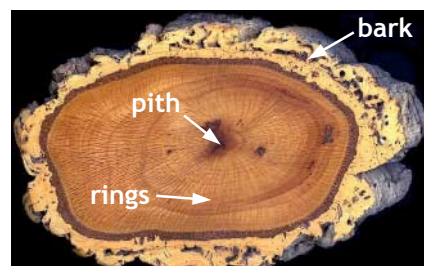
Many dyes were once made from the bark of common trees in Ireland, for example the bark of birch trees was used for leather tanning and for preserving fishermen's lines, while that of apple trees could dye wool yellow. Bark is also made into paper. As explained above, all bark is effectively a type of cork. But the cork we use for wine bottle and notice boards is made from the bark of the Cork oak (see below), which grows mainly in the Mediterranean and North Africa.



How is bark formed?

The main difference between trees and shrubs and most other plants is in the way the main stem (or trunk) gets wider and stronger each year. In the very centre is the **pith**, this is what forms the stem of all other plants. Around this is a layer of **cambium**, the cells of which divide every year to produce **xylem** on the inside and **phloem** on the outside. Xylem transports water and minerals within the stem, and phloem transports food and energy.

If a tree is cut down you can see these obvious rings of annual growth, and with each year's growth the trunk expands and the new bark cells are grown on the very outside to protect the inner rings of cells. The outermost layer of bark is in fact a type of cork and is made up of dead cells, giving bark its gnarly effect.



Cross-section of the Cork Oak tree.

Courtesy of Plantsurfer

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