Do you enjoy tenuous links between dogs and trees? Worried you're boring your four-legged companions? Need new topics of conversation?

Then this is the trail for you…

Follow Wakehurst's dog walking route and dive into ecology, economics and the medicinal value of all things bark.

The peeling bark of the paperbark maple is translucent.

Andrew McRobb / © RBG Kew

1 Paperbark maple (*Acer griseum*)

Location: ///label.presumes.owls
Always remember to exfoliate – it might just save you from extinction.

There are thought to be less than 250 mature paperbark maples in the wild. You'll notice its peeling or 'exfoliating' bark. This decorative quality means it's popular in horticulture and can be found in over 200 botanic gardens like Wakehurst.

One of the reasons the paperbark maple is under threat is because its fruits are often parthenocarpic, meaning they don't produce seeds.

Several dogwood species are prized for their colourful bark.

2 A canine conundrum: Giant dogwood (*Cornus controversa*)

Location: ///tadpole.basher.typically
Dogs or dags? What are dogwoods named after?

A) Dags? Sharp objects like daggers. Supposedly, butchers used the UK's native dogwood (*Cornus sanguinea*), to make their skewers.

B) Dogs? Dogwoods grow dogberries – berries that taste so bad they're fit only for dogs.

We'll leave that one with you!

3 Barking up the wrong shrub: *Rhododendron* species

Location: ///probe.billiard.hobbies
It's not all about trees – bark protects the cambium of all woody plants, including shrubs like our rhododendrons.

Cambium is a tissue in trees that divides to produce the cells responsible for new growth. As cells pass further from cambium they eventually die, creating structures which support and protect living tissue.

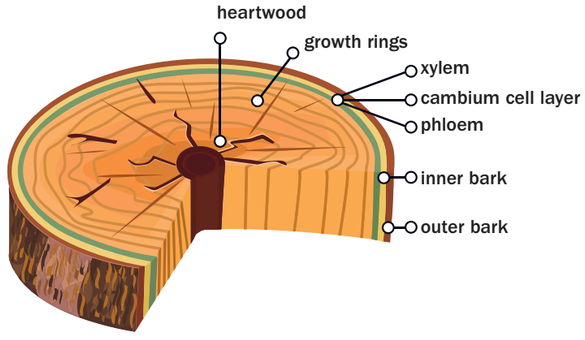
Wakehurst's rhododendron collection is globally significant.

Andrew McRobb / © RBG Kew

Phloem cells make up the outer layer of the cambium. They distribute sugar produced from photosynthesis throughout the plant. Old phloem cells eventually become bark.

Xylem makes up the inside layer of the cambium. It draws nutrients and water up from the roots. Old xylem cells eventually become heartwood.

Around 25 per cent of all rhododendron species are threatened with extinction in the wild. Wakehurst's globally significant collection contains around 300 IUCN Red-Listed specimens.



Peeling back the layers of bark.

Key

- Designated dog walking routes
- Off-lead area
- Steep areas on the path (not suitable for wheelchairs, the chevron indicates the downhill direction)
- Water bowls
- Dog waste bins
- Steps
- Toilets

Route

Distance: 4.2 km **Time:** 1–2 hours

The Scots pine is our only native pine.

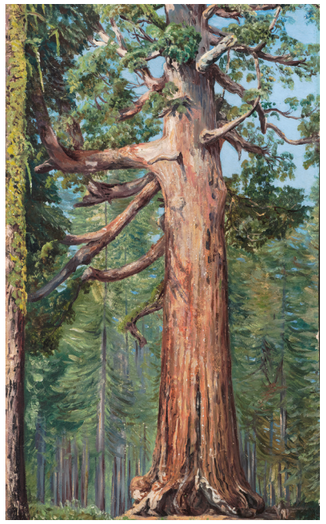
Andrew McRobb / © RBG Kew

4 Scots pine (*Pinus sylvestris*)

Location: ///contents.deflated.withdraw
The inner bark of Scots pine is edible.

Traditionally, Sámi peoples of northern Scandinavia harvest the bark in midsummer. It can be eaten raw or dried and ground into flour. The harvesting method leaves trees standing, and there is evidence of harvested trees reaching over 600 years in age.

Scots pine is the most widely distributed conifer in the world with a range stretching from Spain to Siberia.



'The "Great Grisly" Big Tree of the Mariposa Grove' by Marianne North, 1870.

5 Giant redwood (*Sequoiadendron giganteum*)

Location: ///centuries.froth.kitchen
This famously fire-resistant bark can grow up to two feet thick – longer than a Jack Russell tip to tail!

Lesser known is its remarkable ability to disperse energy. Its bark fibres continually cross, creating an overlapping net. Air pockets created by this latticed structure insulate the tree, providing protection from rockfalls in its mountainous home. Building materials inspired by giant redwood bark have the potential to create earthquake-proof homes of the future.

Bark covers roots as well. Yew roots can be seen along Rock Walk.

Jim Holden / © RBG Kew

6 European yew (*Taxus baccata*)

Location: ///thrusters.mammoth.shorter
A tale of two yews.

Yews produce poisonous chemicals, so they're left alone by herbivores. Those chemicals attracted drug researchers who discovered small amounts of paclitaxel in the bark, which was used in chemotherapy drugs from the 1960s.

Unfortunately for the Pacific yew (*Taxus brevifolia*), where paclitaxel was first isolated, trees had to be felled to extract paclitaxel and the ratio for treatment was around three mature trees to one patient. Fortunately, further research found large amounts of paclitaxel in European yews, meaning it can be sustainably harvested from foliage.

7 Cork oak (*Quercus suber*)

Location: ///grit.quibble.shredding
By drinking wine you're contributing to a diverse biocultural landscape – well done you!

Cork oaks are able to regenerate their outer bark and can be sustainably harvested every 9–12 years.

Traditional management of cork oak woodlands, called *dehesa* in Spain and *montado* in Portugal, supports an abundant variety of wildlife. By using renewable forest products like the corks in wine bottles (floor tiles and shoes are also available!), you're helping to support landscapes rich in biodiversity.

© tpholland / Creative Commons

A cork hat from Kew's Economic Botany Collection.

8 It's not only dogs that shed their fur! Black salle (*Eucalyptus stellulata*)

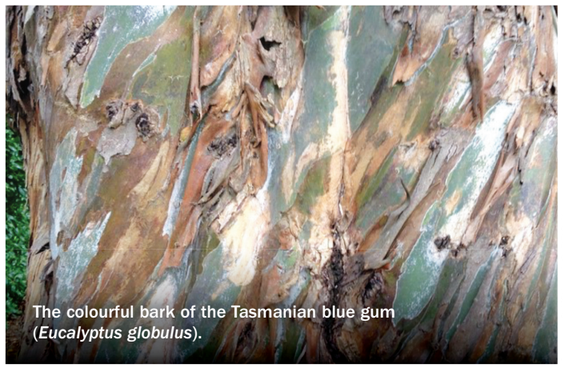
Location: ///swear.forced.nourished
Coates Wood highlights amazing variety in the genus *Eucalyptus*. A common feature across many eucalyptus species is bark shedding – whether that bark is smooth or 'woolly'!

We don't know for certain why trees shed bark, but potential reasons include:

- natural growth and renewal
- water conservation
- fire adaptation
- pest prevention
- toxin removal

Or it could be a combination of reasons.

A favourite species here is *Eucalyptus stellulata*. Its striking purples can be seen about ten metres off the path.



The colourful bark of the Tasmanian blue gum (*Eucalyptus globulus*).

George Griffiths / © RBG Kew

9 Paper birch (*Betula papyrifera*)

Location: ///taller.elastic.petition
Whatever the need, there's a bark for that.

The Ojibwe and Wabanaki, First Nations peoples of north-eastern North America, make canoes crafted from sustainably harvested paper birch bark. In summer, the bark is peeled and skilfully moulded around a white cedar (*Thuja occidentalis*) frame and stitched with white spruce (*Picea glauca*) roots.

Clothing can be made from bark too! Historically, Salish peoples of the Pacific Northwest made fibres from Western red cedar (*Thuja plicata*). The inner bark was shredded and pounded. When soft, it could be turned into cordage for rope, waterproof hats, and even nappies!

A paper birch water vessel from Kew's Economic Botany Collection.

10 Oak moss (*Evernia prunastri*)

Location: ///shakes.anguished.tape
A labradoodle coat or bark-based habitat?

UK oak trees are home to over 700 types of lichen, with the fissured bark of mature oaks providing a perfect micro-habitat.

The oak moss covering this tree is an air quality indicator. Where it grows, atmospheric nitrogen levels are low.

Oak moss is used in the perfume industry, providing an earthy base note for many fragrances. It's also a favourite nesting material of the long-tailed tit, as it creates a camouflaged nest.

Oak moss grows on a variety of tree species.

© Vesa Oikonen / Public domain

English oak *(Quercus robur)*

Our canine code

Please help us to ensure that all our visitors can enjoy their day by following our canine code.

- Dogs must remain on a short lead at all times on the designated route. Short leads are available to borrow from the Visitor Centre.
- Please be a responsible owner and clear up after your dog. Waste bins are provided along the designated paths.
- We welcome up to two dogs per adult to enjoy the gardens.
- Dogs can stretch their legs in our brand-new off-lead area beside the Millennium Seed Bank. See map for directions.
- To protect our plant collections and wildlife, please walk your dog on the designated paths and ensure they do not walk onto planting beds or borders.
- Assistance dogs are welcome across the entire site.
- Dogs are not permitted to enter the outdoor play spaces or any buildings, except the Visitor Centre and Stables Pantry.
- Please ensure your dog doesn't run up to other people - especially children.
- Please do not leave dogs unattended at any time, including in the visitor car park.
- Wakehurst reserves the right to refuse entry to, or remove, any dog thought to be dangerous to visitors, staff, wildlife or other dogs.

We hope you and your dog enjoy your time at Wakehurst. With your visit, you are contributing to our critical conservation work and pioneering science research as we combat diversity loss - now that's a dog walk with a difference.

Thank you for visiting today

Why not share a picture of your visit?
Use @Wakehurst_Kew on Instagram.

Become a Wakehurst member

You can enjoy unlimited visits, exclusive access to events and discounts, and help us to build a greener future for all. Starting at just £35 per year, your membership awaits.

You can speak to one of our dedicated team at the Visitor Centre, give us a call on **01444 894066** or enrol online at **kew.org/wakehurst-membership**.