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# A Field Guide to Leaflings



Guardians of the trees  
Owen Churcher & Niamh Sharkey





## A Field Guide to Leaflings

There is a secret world, an ancient world, a world populated with the most magnificent giants and curious creatures – some so small that they could pass through the eye of a needle.

It is a magical world, and yet to enter it is quite simple, for the true magic of the world is hidden in plain sight. Its giants are known well to us: trees. But few humans have seen the guardians of these trees – leaflings. Most have been children, for to see them you need keen eyes, to hear them, sharp hearing and, most importantly, you need a mind that is still open to all of the world's possibilities.

We first came across leaflings as children and we've seen and heard all kinds; for each species of tree has its own unique leaflings.

One leafling has been with us from the very start – a pippin-apple-tree leafling named Flann. Since we met Flann he has been a companion on our adventures at home and as we travelled the world.

We wrote this *Field Guide to Leaflings* and their trees so that others might notice this world: how wondrous it is, but also how fragile. So that, with the leaflings' help, readers can learn more about trees and together we can see them thrive.

If the leaflings have taught us one thing it is that no one is too small to make a difference.

### A NOTE ON THE DRAWINGS

Leaflings are quite impossible to take a photograph of, and what use is a field guide without pictures?

I've illustrated the guide instead, as the leaflings seem to have gotten used to me and my paint pots. I sometimes wonder if the Keeper Leaflings are busy too, drawing me.

NS

Niamh & Owen  
and Flann



# Meet the Leaflings

Here are some of the leaflings we've met so far, leaflings from all over the world. It's possible to tell what kind of tree a leafling belongs to based on the leafling's appearance.

Leaflings, you see, have roles within a tree, similar to those of bees in a hive. Can you guess which trees these leaflings are the guardians of?



**Flann**  
LINK LEAFLING

Link Leaflings maintain the web of roots that connect their trees to others far and wide.



**Maja**  
SHIELD LEAFLING

Shield Leaflings protect their tree against attacks from insects and diseases.



**Hiroki**  
BLOSSOM LEAFLING

Blossom Leaflings prepare the tree flowers or blossoms so that they are attractive to bees and other pollinators.

**Wilma**  
KEEPER LEAFLING

Keeper Leaflings are the keepers of the stories that we tell about trees and the stories that trees themselves tell.



**Searlett**  
MINDER LEAFLING

Minder Leaflings look after the birds, animals and insects that rely on their tree for food and shelter.



Hungry little falls seen 'you?!



**Ayaan**  
SPARK LEAFLING

Spark Leaflings manage the process of photosynthesis (more about that later).

**Curro**  
HOUSE LEAFLING

House Leaflings build homes, and not just for leaflings. They also help out with nest and hive building and turn the hollows of trees into cozy homes for all sorts of creatures.



# Sakura

Nowhere is more famous for its cherry blossom than Japan, where the trees are considered sacred.

There is even a TV forecast to predict when the cherry trees will bloom each spring (not that leaflings watch TV of course). But people all over Japan wait for the bloom to arrive, and when it does, they gather together under the sakura for **HANAMI** (the viewing of sakura); and for a traditional picnic at which they eat, drink, dance, sing and celebrate life. While they do this, the trees are celebrating too.

Leading up to the bloom, there is a festive atmosphere among many leaflings, but Blossom Leaflings like Akino and Hirenki have a lot of work to do. They must keep their blossoms looking and smelling their best to attract bees and butterflies, who come to the flowers to feed on their sweet nectar.

Bees and butterflies are pollinators. Pollen sticks to their bodies when they visit flowers, and they carry it with them from one tree to another. Pollinators help plants make seeds.

Busy leaflings, busy bees!

A leafling's work is never done.

All Blossom Leaflings are competitive: their tree's flowers must look and smell exquisite. But for a cherry tree's Blossom Leafling? Well let's just say the standards are through the canopy!

Most Japanese cherry trees, or sakura, live a short life (16-20 years) but one that is full of colour and drama. They grow to somewhere between 5-12 metres tall.

Leaf Fruit Flower

CLICK HERE

Blossoms away!

Once the blossom starts to fall and scatter, the leaflings take time to visit their neighbours and friends in other trees.

People are a little sad to see the bloom end - but there is always next year to look forward to.

Link leaflings work hard during the bloom, keeping the wood wide and open, so that their trees are able to speak with others far and wide.

CLICK HERE

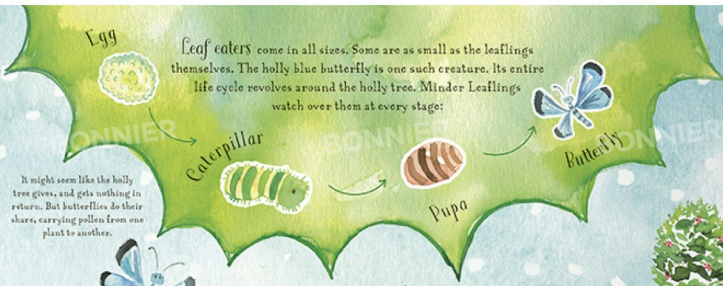
# Holly

Small, even for leaflings, the guardians of the holly tree can be difficult to find, and hard to get to know.

They are often as prickly as their tree. But don't let that stop you! Just like the holly trees' bright red berries, these leaflings are colourful creatures.

**Iarla** is a Keeper Leafling. As well as his stories, Iarla can tell you the many names by which his tree is known. These include Cullmann (Irish) and Bein-Vix (Norwe).

The holly is an understory tree. This means that it usually grows underneath the canopy (tree-top layer) of a forest. It can live for up to 300 years and reaches a typical height of 15 metres.



The folk believed that two kings and a queen ruled the forest. The kings were **Oak** and **Holly**. Unlike trees, you might think the mighty oak are tall and staid, and the lowly holly, but in winter when the oak had lost all its leaves, oak wood burns. And so the **Oak King** would rule from the winter to summer solstice, whereas the **Holly King** was given over to the winter solstice, who ruled from the summer to winter solstice.

**Christmas Tree** is the name Iarla is most proud of, for the holly tree has long been associated with Christmas. Its scarlet berries and glossy leaves make it perfect for decorating homes.



The **holly** is evergreen, keeping its leaves throughout the year. In winter, its berries give animals, like the robin, food in the cold months.



# Kapok

There is nowhere in the world with more trees than the Amazon rainforest.

Almost 400 billion trees live there; trees that come in all shapes and sizes. Just think how many different leaflings must live there too!



Raindrops make me smile!

Hugo is a giant in leafling form, but Hugo lives in the kapok tree, a giant among giants. It can grow at the breakfast speed of a rocket a year, until it rises high above the forest canopy.

Blossom Leaflings in the kapok have the rather unusual job of making sure the tree's blossoms stay.



The leaves of epiphytes (plants that grow on other plants) collect rainwater, in which tree frog tadpoles swim.



Pong!

If that's night's even though the flowers look pretty, they're still pretty busy. But to date they're still great and they come to the blossoms at night, carrying pollen from other trees.

BONNIER

Juana is a Mixer Leafling. Leafings like to dip their toes in the water here, but the tadpoles don't seem to mind.

CLICK HERE

CLICK HERE

The kapok grows up to 100m tall. When it's over 10m tall, it's a Hugo. Hugo is a Spark Leafling and it's very smart. It can tell you, even if it's dark, how high above the ground it's standing. It can tell you, even if it's dark, how high above the ground it's standing.

How many creatures can you find living in the kapok?



Whoo... I'm feeling a little dizzy.

Kapok blossoms become pods with hundreds of seeds on silky fibres inside. Blossom leafings release the seeds to be carried far and wide on the wind.

**Photosynthesis**  
This is the process by which trees make food using the energy of the sun.

Most of the action takes place in the crown - the treetop - where the leaves, which make the plant's food, are found.

Water is absorbed through the tree's roots and travels to the tree's crown in special tubes.

The tree's leaves absorb sunlight and carbon dioxide from the air.

They use chlorophyll, the pigment that makes plants green, to convert these into glucose.

Glucose is a kind of sugar that feeds the tree, and in the process of making it, the tree releases oxygen - something leafings and humans can't live without.

**FLANN NOTE**

Some species of leafing have their own way to protect the tree from harmful animals climbing up to eat its thin bark. Crisp? Then protect me as well!

# Oak

The oak is tall with a strong trunk and wide crown. Its bark is tough, and as important to a tree as skin is to you and me.

Many woodland oaks are deciduous trees, which means they drop their leaves in winter. Leaves aren't all they drop! Acorns fall in autumn when the woods are amber and bronze. Each is packed with everything a spring seedling could need.

## Druids

In ancient Celtic times were the keepers of wisdom and knowledge. The word 'druid' means 'oak knower'.

A tree's bark protects it from harmful insects and fungi and also keeps the wood from drying out. Trees are around 50 per cent water (humans are 60 per cent).

There are over 460 species of oak tree. Although they can grow in all kinds of habitats, for the most part, oaks are native to the northern hemisphere. Oaks can grow to over 40 metres high, and may live for 1,000 years.

Acorn  
Cotkin  
Leaf

Spiky Leaflings treat any damage done to the bark of their tree. Trees are sensitive, even wrinkly old oaks, but they can also renew their bark as they grow.

I love hanging out!

# A Tree of Life

From crown to root, the oak is teeming with life - particularly bugs! A single oak can house hundreds of species of insect - not all welcome guests.

## Woodpeckers

Woodpeckers drill into trees when building their nests, and also to find and eat wood-boring insects. Mostly they favour dead wood, so Leaflings don't mind them.

Using their long snouts, acorn weevils drill into acorns to lay their eggs. Lane and Will see Shield Leaflings, and they must see to it that enough acorns grow into young trees. Acorns containing weevils will rot, so Shield Leaflings, BEWARE!

The stag beetle lays its eggs in the dead wood of old oaks, and its larvae (young insects) eat up and break down the wood, turning it into soil for new trees.

In England there are more than 2,000 ancient oak trees, which are aged between 400 and 1,000 years. Ancient oaks are not the tallest or the fattest, but it most cases they are the fattest. The Keeper Leafling of ancient oaks often have a similar appearance!

Acorn season!

Will  
Badgers, joys and squirrels  
Oscar

Oscar is a Minder Leafling and he knows the importance of the acorns to forest critters. Squirrels are known for hiding or caching acorns to recover later. Sometimes Minder Leaflings play hide-and-seek with the squirrels' acorns.

Now close your eyes and count to 100!

Oak leafling house

FLANN NOIT

There is an ancient oak in Leinslade called the 'Becher's Oak'. In the year, the Square of the Oaks had a sit-down dinner for all guests in the hollow trunk of the tree. It is thought to be between 800 and 1,000 years old - one of the oldest trees in Europe.

I'm feeling a bit peckish myself!



# Leaflings for All Seasons

For leaflings, each season comes with its own tasks.

## Autumn

In autumn the days start to shorten and the temperature drops. Spark Leaflings store the nutrients from the leaves to feed the tree over winter. The leaves change colour and then drop. Blossom Leafling like **LIZZI** scatter the acorns, shaking them loose from the oak's branches.

## Spring

In spring the trees come to life. Buds and then leaves start to unfurl. Everywhere, there is new growth. First the oak produces catkins, the male flowers. These flowers are full of pollen grains. Later in the spring, oak trees produce female flowers. If the pollen from a catkin lands on the female flower of another oak tree, it will fertilise it and produce an acorn.

Spring is the busiest time of the year for a Blossom Leafling like **HERNICE**.

## Winter

In the coldest season, the oak is bare of leaves and doesn't catch the wind as much, so its branches can hold out against snow and ice. To survive the winter, the oak needs to use as little energy as possible. But there's still plenty going on. The tree provides shelter for all sorts of creatures, like spiders and woodlice, bats and owls. Moulder Leafling like **DASHI** have too much work to hibernate like some creatures.

## Summer

The oak is in full leaf and its branches are drooping with their weight. But summer isn't all fun and games. Hundreds of insect species view the oak simply as dinner, and it is up to Shield Leafling like **MAX** to curb their appetite. Summer is a time of plenty for trees: pollen is spread far and wide, flowering trees bloom and fruit trees bear fruit like cherries and apples.

For leaflings, each season has its own beauty. So too does the magnificent oak tree as it is transformed each autumn, winter, spring and summer.

Deciduous means to fall off, and each of the 700,000 leaves on this oak tree will be shed at the end of the growing season.



Evergreen trees do not lose their leaves all at once, and keep a good covering throughout the year.



## Scots Pine

Scots pines like the Scots Pine don't flower. Instead of being inside a fruit, the winged seeds are found in pine cones. The cones open when the weather is warm and the seeds stand a good chance of sprouting.

Greetings from  
**NORWAY**

Not all conifer woodlands are the same. Some are quite different.

Sale travels, leaf letters.

Tree mail!

Hello.

# Tree Talk

Trees have much to say and, like humans, they have more than one means of keeping in touch. It is up to Link Leafings like Flann to keep the lines of communication open.

Trees in a forest, trees in a city park, even those in your garden are connected via a network of roots and fungi that has become known as the wood wide web.

Much scientific research is being done into the inner life of trees and into how they sense the world around them. Maybe leafings have been listening to their voices since the first trees appeared on Earth.

In times of trouble, the wood wide web acts as an alarm, call, so that other trees can prepare their defences.

Parent trees use the wood wide web to nurture their saplings, feeding them with a thick sweet liquid called glucose. Meanwhile, wise old trees that appear no more than hollow stumps are fed water and nutrients via the same network, and kept alive.

Sometimes dying trees send nutrients to healthy neighbours. Leafings know that together, trees are stronger. It is the same for leafings.

Even when there is no danger, the web is abuzz with tree conversation as all manner of information is passed from tree to tree. In fact, the social life of all plants, it seems, is far busier than humans had presumed.

Trees' voices are not like our own. Most of the sounds that trees produce are either too low or too high for our ears to pick up without the aid of listening garden or in a forest. Think of the *fixing, humming, crackling, hissing and clicking* sounds that are just out of the reach of your senses.

What gossip and chatter might you be missing? The leafings know. Perhaps they'll let you in on the conversation?



pop!

Snap!

shhh

ping!

creek

whisper

rustle

fizz

Snap!

fizz

chatter

Listen carefully. Can you hear it? Tree talk.

Trees look after their babies just like leafings, do?

Aphid attack! Sound the alarm!

What are aphids? Little sap-sucking bugs!

You'll never believe what he told me...

# Green Streets

Our cities are abuzz with energy. There's always something going on, and there are so many interesting people, trees, and leaflings to meet.

More and more of us live in towns and cities, but we still need to connect with nature. Trees are essential to our well-being.

Look for leaflings in your pot plants!

It's normal for there to be carbon dioxide in our air, but too much is bad news for us all. Carbon dioxide is a greenhouse gas, which means it traps the heat from the sun leaving the Earth's atmosphere. Over time this leads to global warming. Burning fossil fuels in cars, planes and power stations produces lots of carbon dioxide.

Cities are not a natural environment for trees. They miss the forest, and their relatives. Their nearest neighbours might be a bus or train ride away. Trees can't take buses or ride trains, but leaflings can. Urban leaflings love to travel by bus, rail or tram, to catch up with trees and leaflings in other neighbourhoods. Keep an eye out for them.

Trees make the air we breathe in our cities cleaner, removing carbon dioxide from it, and storing the gas in their trunks, branches and leaves. A single mature tree can absorb around 22 kilograms of carbon dioxide a year, and release enough oxygen to support a human for four months.

The shade from the crowns of mature trees can also have a cooling effect on our cities, some of which are hotspots and prone to dangerous heat waves.

# Famous City Trees

There are some remarkable trees in our cities, and wherever there are remarkable trees, there are remarkable leaflings.

Meet some famous city trees!

Get to know your neighbourhood leaflings!

Can you imagine cities of the future, designed as much with trees in mind, as humans?

**The Hungry Tree, Dublin**



In Dublin, there is a tribe of leaflings we called the Hungry Leaflings. The leaflings themselves aren't any more hungry than other leaflings we've met, but their tree - a London plane tree - looks like it has eaten a park bench, absorbing the seat in its trunk, as it has grown more rotund.

**The Upside-Down Fig, Bacoli**



Another tribe of leaflings, the Upside-downers, hang like bats from their fig tree in Bacoli, close to Naples, Italy. The strange fig rootlet rosette on the ceiling of an ancient Roman arch, and instead of growing upwards it grows towards the ground.

**The Dinosaur, New York**



The 200-year-old elm is one of the oldest trees in Manhattan and is known as the Dinosaur. In 1776 the first President of the United States, George Washington, is said to have watched the Battle of Washington Heights from beneath it. There are leaflings living there now who watched George Washington watching the battle.

**FLANN NOTE**

Some humans love trees almost as much as leaflings. One Italian architect named Stefano Barozzi has turned skyscrapers into vertical forests. The 17 floors towers in Milan are packed with 500 trees. In the future, cities and forests might have a lot more in common. Leaflings are moving in, and up!

# Baobab

In Africa, the baobab tree is known as the 'tree of life', and baobab leaflings know a thing or two about surviving. They are among the longest lived leaflings on Earth.

The baobab tree is a native of Madagascar and West and Southern Africa. It is the largest succulent plant in the world, reaching up to 20 metres. It can live for up to 5,000 years.



There are six species of baobabs on the island of Madagascar, off the coast of East Africa. Nya's tree is a Granddier's baobab, and it is one of the trees that line Madagascar's famous Avenue of Baobabs.

Baobab leaflings are tough customers, and their trees are tough, too, made to withstand drought, fire and termites. But there are modern threats to their survival, especially the clearing of forests for farmland.

The baobab puts the 'buck' into succulent! A succulent is a plant that has adapted to store water, and the baobab's trunk can store thousands of litres. Humans can't access this water, but the tree's fruit is one of the most nutritious on the planet.



## A Tree of Stories

With its strange upside-down appearance, great strength and size, is it any wonder the baobab is at the heart of so many African legends?



**FLANN NOTE**  
The Latin 'lunaris' means 'ghost' and in Madagascar lemurs are associated with spirits - perhaps because they are active at night.

Isitsi



Madagascar is home to about half the world's species of chameleons. Just like a chameleon Nya, a Minder Leafling, is an expert at blending in.

Moose lemurs do have very large and peculiar eyes - spooky! Not to leaflings though.



The Mosses leafling on the Madagascar baobabs have their webs out and unfurling and they must work at night, because the baobab is pollinated by nocturnal mouse lemurs, bats and moths.

# Kauri

Tāne Mahuta is the biggest living kauri tree and has a crown that's over 35 metres wide. Tāne Mahuta means 'Lord of the Forest' in the Māori language.

Kauri trees are native to New Zealand. These conifers can grow up to 45 metres tall, and are among the most ancient trees on the planet.



**CLICK HERE**

One after another the birds refused.

For the **Uti**, the earth was too dark, too cold - No!

For the **Pukeko**, the earth was too cold, too damp - No!

The **pipiwharauroa** was too wrapped up with building its nest - No!

When it came to its turn, the brown kiwi uncovered - yes! It would go to the forest floor and protect Tāne mahuta's children, the trees, and in doing so, the kiwi lost the power of flight.

**CLICK HERE**

The North Island brown kiwi is a resident of Wairoa Forest. The kiwi is a flightless bird with big feet, a long beak, small wings and fur-like feathers. It holds a special place in the heart of leaflings, and in Māori culture.

Tāne Mahuta gets a great deal of attention. But as long as the visiting humans remain on the boardwalk, Tui doesn't mind. The kauri has shallow feeder roots that are easily damaged.



In the same forest lives Te Matua Ngahere. Its Māori name means Father of the Forest. It is thought to be between 2,500 and 3,000 years old and could be the oldest tree in New Zealand.

# Red River Gum

The red river gum grows everywhere in Australia except Tasmania. Eucalyptus trees are known as gum trees because they bleed a thick, gooey substance if their bark is broken.

There are over 700 species of eucalyptus trees of which most like the red river gum, are native only to Australia. This tree likes to grow along riverbanks and floodplains. It reaches heights of 20-30 metres and can live for 300-1,000 years.



It's morning on the Murrumbidgee River, and Jemma is directing leafling traffic while the koalas have breakfast. For creatures that sleep for 22 out of 24 hours, koalas sure have a good appetite.

**CLICK HERE**

It's a koala and kangaroos live a pouch inside of which they carry and nurse their young.

**Marsupials**

Leaflings have learned a lot from squirrel gliders. These nocturnal possums can glide 60 metres in one leap. They use the thin membranes of skin between their wrist and ankles just like a hang glider.

**CLICK HERE**

Gum trees are very important to koalas. Eucalyptus leaves are all they eat, and they very rarely leave the tree's branches.

Murrumbidgee means big water. Red river gums need water, not just from rain, but from flooding as well, so it recharges the soil. The leaflings take a dip in a local swimming hole to recharge too.

Come on in, the water's perfect.

Yahoo!

Eucalyptus trees had to adapt in order to survive Australia's bushfires. Some actually need fire to melt the resin with which their cones are sealed and release the seeds inside. Gosh, warming means that bushfires are wilder, and more dangerous - even to eucalypts.



## Coast & Giant Redwood

Standing tall, redwood or sequoia leaflings seem to look down on the leaflings of other trees. Even the leaflings of the coast and giant redwood can be standoffish with one another.

Both tribes are impressive, but coast redwood leaflings are the tallest leaflings of all.

Being giants in leafling terms, you'd think the redwood leaflings wouldn't be hard to spot. Well, think again in trees so tall, it's easy to hide.

Ah, there you are, Flann. I almost tripped over you!



How's the weather up there?



### FLANN NOTE

*There is a third species of redwood, the dawn redwood. Humans thought that it was extinct, until the 1940s. Then, botanists found living dawn redwoods in central China. If these humans had just thought to ask!*

### Leaf



### Cones

Coast redwood grow along the Pacific coast of North America, while giant redwood are found in the Sierra Nevada mountain range, 300 kilometres to the east. Both conifers grow to heights of 90 metres and more and can live for thousands of years. Coast and giant redwoods are named for their pinkish-red wood. They are also called sequoia trees.

The tallest tree on Earth, a coast redwood, grows in Redwood National and State Park, California, but its exact location is kept secret. It was discovered in 2006 and is named Hyperion. It stands a whopping 116.07 metres tall – about six storeys taller than the Statue of Liberty.

Walking among these great trees as the fog rolls in, it can feel like you're alone. Of course, there are leaflings above you, but the redwood forests are a habitat for all sorts of other creatures, though they can be a little shy.

### Cambium layer

This produces bark and expands so that the tree grows wider.

### Outer bark

This thick layer acts like a shield.



**Lower branch to phloem**  
This moves sugars from the leaves to the rest of the tree.

### Heartwood

Found at the centre of the tree. This is old wood, and it's in the tree stable and strong.

### Sapwood

This delivers water from the roots to the rest of the tree.

Each ring shows a year of growth. How old is this tree?

Hoo-hoo  
Hoo-hoo



Hoo-hoo  
Hoo-hoo



# Peepal

The peepal is a strangler fig. It often begins life as an epiphyte, growing on another tree.

As it gets bigger its roots extend down to the earth, forming a trunk. It will eventually kill its host tree.

Native to many parts of Asia, the peepal tree goes by many names: Bo, baobab, and sacred fig to name but a few. Trees reach heights of 18-30 metres and typically lives for 900-1,500 years. Peepal comes from the ancient Indian language, Sanskrit.



Each species of fig needs a unique species of fig wasp to pollinate it. Without this partnership, neither wasp nor tree would survive. Wasps hatch from eggs inside the fig, where males stay all their lives. Females travel to other fig flowers, pollinating them in the process. The relationship between fig wasp and figs is ancient - perhaps as much as 80 million years old.

There's more to these figs than meets the eye.



Dev is a Blossom Leafling. The peepal bears a false fruit - the fig. You see, a fig isn't quite what it seems. It isn't a single piece of fruit, but a collection of tiny flowers inside a soft shell.



Who eats figs? Over 1,200 bird and animal species. That's who.

Deepthi, a Minder Leafling, is shaking a branch with a pair of tufted grey langur monkeys, each munching on a sweet fig.

In Sri Lanka, there is a bodhi tree, the Jaya Sri Maha Bodhi, said to have been grown from a branch of the original tree under which the Buddha attained enlightenment. Monks have cared for this tree for more than 2,000 years. The leaflings of the Jaya Sri Maha Bodhi know just how much humans can do to protect the trees in our world, if they put their minds to it.



# Huangshan Pine

Of all the leaflings we've come across, those of the Huangshan Yellow Mountain pine in eastern China are the most elusive.

The most famous of the Huangshan pines is the Guest Greeting Pine. The Greeting Pine seems to be opening its branches wide in welcome to pilgrims. It has become a national symbol of hospitality.

The Huangshan pine is an alpine tree that is native to eastern China. This evergreen grows to heights of 15-25 metres, and can live for over 100 years.



CLICK HERE

The Yellow Mountains has a legendary quality to it, and it's not difficult to imagine it as a land of dragons.



To reach the peaks of Huangshan, there are 60,000 steps to climb. The pines cling to rugged towers of granite, some over 1,000 metres high, that look like trolls playing hide and seek in the mist.

## Cloud leopards

are expert climbers, and even this cub is no slouch when it comes to scaling a Huangshan pine. Leaflings aren't on the big cat's menu, but still get a bit nervous - just look at those teeth! Cloud leopards have the largest canine teeth in proportion to their body size of any wild cat.

Yet to a Minder Leafling, spotting a Minder Leafling up a Huangshan pine is no easy matter. The roots of these trees can extend for up to 10 times the height of its trunk.

CLICK HERE



# Sweet Chestnut

The sweet chestnut thrives in Europe's mountain ranges. On Corsica, in the Mediterranean, it has a special place in the islanders' hearts.

Chestnuts have been harvested in Corsica for hundreds of years. It is traditional to roast chestnuts in a pan punctured with holes. But the nuts can also be ground into flour for bread making or cooked in their skins on an open fire. They are a traditional European Christmas food.

The sweet or Spanish chestnut is native to southern Europe, as well as parts of Africa and Asia. It can grow to 35 metres tall, and live for up to 2,000 years.

Leaf 

Chestnut 

FLANN NOIC

Since chestnut trees are believed to have been introduced to the rest of Europe from Greece, and throughout the continent there are ancient festivals celebrating the nut. People are nuts about them!

Even Milder Leafings like Roman need to be careful around the spikes of the seed cases. Once they have fallen, they open naturally on the ground to reveal a shiny chestnut or two.



Chestnuts come wrapped in a squirrel-proof prickly pale green case. Some of them have to sprout and become seedlings one day!




The Hundred Horse Chestnut Tree is believed to be the oldest and largest sweet chestnut in Europe. It's 16th-century tree grows close to Mont-Estou, 1000m up the island of Sicily, Italy.

Legend has it that in a thunderstorm, the Queen of Naples and her one hundred knights took shelter along with their horses under its branches. Just imagine how many leafings it can fit!

You would think leafings would like living in the shadow of a volcano, but the soil on the slopes of Mount Etna is rich, and so this tree has thrived for over 2,000 years. Some claim that it's 4,000 years old. Perhaps a leafing started that rumour. Leafings love nothing better than a tall tale.

The sweet chestnut shouldn't be confused with the horse chestnut, which is unrelated. Horse chestnuts produce a similar nut, a conker, but it is larger.

Sweet chestnut 

Conker 

Deer and other mammals can eat horse chestnuts, but they are toxic to humans.




In Galicia, in Spain's northwest, the sweet chestnut is important too, and Magosto celebrations are held each autumn to celebrate the harvest. These traditional festivities were held in a chestnut grove, within which chestnuts were cooked on an open bonfire.

Chestnuts roasting on an open fire. 





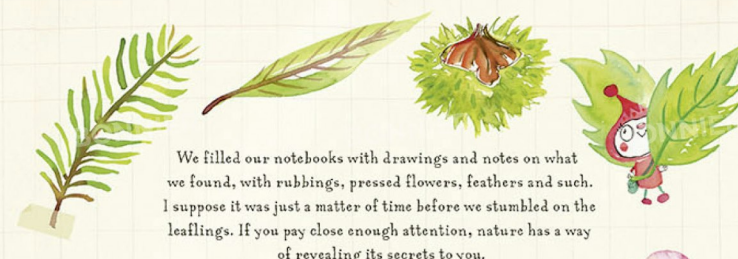


## One last thing . . .

We are not the sole authors of this field guide. We would know nothing, or next to nothing, if not for the leaflings from all over the world who have chosen to share their stories with us. Stories that have taught us much about our connection with nature, and our place in the world.

I guess that we are go-betweens, messengers if you will, between the world of leaflings and their trees and that of people.

We have always shared a love of nature, ever since we were small children. Together we climbed trees, made forts in the long grass, caught frogs in Walt's pond, and had our own path worn through the Witch's Wood to our treehouse.



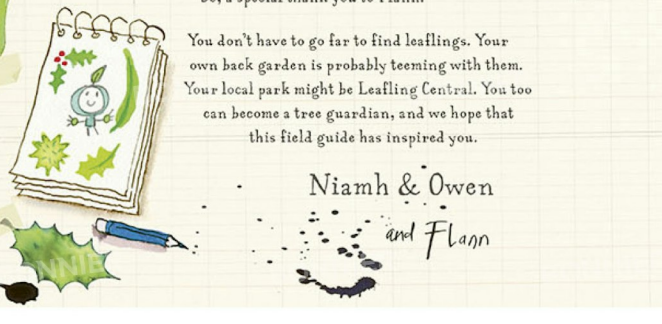
We filled our notebooks with drawings and notes on what we found, with rubbings, pressed flowers, feathers and such. I suppose it was just a matter of time before we stumbled on the leaflings. If you pay close enough attention, nature has a way of revealing its secrets to you.

The idea of putting together this field guide, of sharing what we've learned, might have remained just that, an idea, if not for Flann.

Apple tree leaflings are generally round and jovial with minds as crisp and bright as their tree's ripe fruit. Flann is all of this and more. When he wants something, nothing is going to stand in his way - but he's also enthusiastic and clever, and there's never a dull moment with him around. He has become a firm friend of ours, and if he wasn't so pushy, we might never have begun.

So, a special thank you to Flann.

You don't have to go far to find leaflings. Your own back garden is probably teeming with them. Your local park might be Leafling Central. You too can become a tree guardian, and we hope that this field guide has inspired you.



Niamh & Owen  
and Flann

# Children, Trees, Leaflings

## Spend time around trees

Climb a tree. Sit under a tree and read a book. If it's a good book, perhaps you could read a little out loud. There's no telling who might be listening. Leaflings love a good story. What's that rustling? Leaflings sometimes shake the small branches to show their appreciation.



## Use all of your senses

Remember to use all of your senses. Our sight can take us so far, but if we're tracking leaflings we need to train our other senses too. What do the trees around you smell like? How does it feel to touch the crocodile-skin bark of a juniper tree? Or the paper-thin bark of a birch? Are the trees talking, or is it the wind?



## Take notice of the smaller things

Look at the life a single tree can support. So many of these creatures are small, and just a fraction of them are visible to us above ground. Under its roots a tree is abuzz with Link Leaflings going about their business, keeping everyone on the wood wide web connect.



## Plant a tree

Leaflings will help nurture the newbie, and they'll stick with it as it grows up. There is no better way to befriend the leaflings.



## Get to know their names

Names can be powerful things. If something has been well named, then a little of its spirit will have been caught, a hint of its true nature. Knowing the names of even those trees that grow where you live might well unlock the world of the leaflings. Think of how it feels when someone remembers your name. It can mark the beginning of a new friendship.



## Listen to the bird song

Have you ever noticed how the dawn chorus begins at the crown of the tree, as the birds that are high up receive the first light of morning? The singing travels down the tree until it is wrapped from crown to roots in song. Listen, can you hear the leaflings singing along?

## Listen to the wind

Something happens when you give over your attention in this way - you seem to tune into the natural world and the world of the leaflings.



## Keep a nature notebook

Paint, sketch and make pencil or charcoal rubbings of the underside of leaves, and of rough tree bark. Collect seed pods. Stick fallen petals and leaves into a nature notebook. How do you think this field guide came about?

Being creative opens a magic window onto the world around you.



## Sharpen your sense of adventure

Television and the Internet can make the world seem small, but the opposite is true. The world is much wider than the web. Sharpen your senses.

Get out there. Breathe some air.



Adventure is just around the corner.



