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& fairy tale



Observing the Plants of the Forest
with Hansel & Gretel

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with
Hansel & Gretel



B4U Publishing



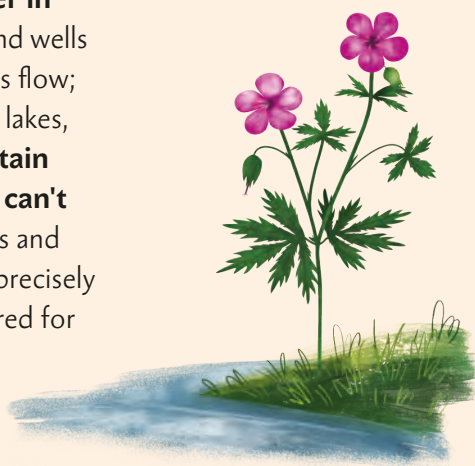
Hansel called out as soon as he took a look. "I think I know now which way to go!" climbing back down like a squirrel. He took Gretel's hand and together they bravely set off, thinking about their mum and dad who were surely looking for them. All of a sudden, the dark forest thinned out. Sunlight tickled their cheeks and led them to a quaint clearing with a bubbling stream. Beautiful flowers of many different shapes and colours grew there. And who would have thought! A peculiar, sweet-smelling house was right in the middle of it all!



Wet places and plants

Types of forest watercourses

Naturally, there's **water in the forest**. Springs and wells out of which brooklets flow; wetlands, deep pools, lakes, or just spots which **retain moisture** as **the sun can't reach them** — ditches and shaded nooks. That's precisely what the doctor ordered for some plants.



Wood geranium

It prefers damp habitats which aren't too dark. It can be found mostly in submontane regions.



Wild garlic

This plant's tasty leaves smell of garlic. Don't mistake them for the toxic lily of the valley!



Chickweed

Don't worry, you can safely munch on this inconspicuous plant while walking in the forest.



Grove forget-me-not

This plant has pale blue blossoms and loves damp places in the forest.



Touch-me-not

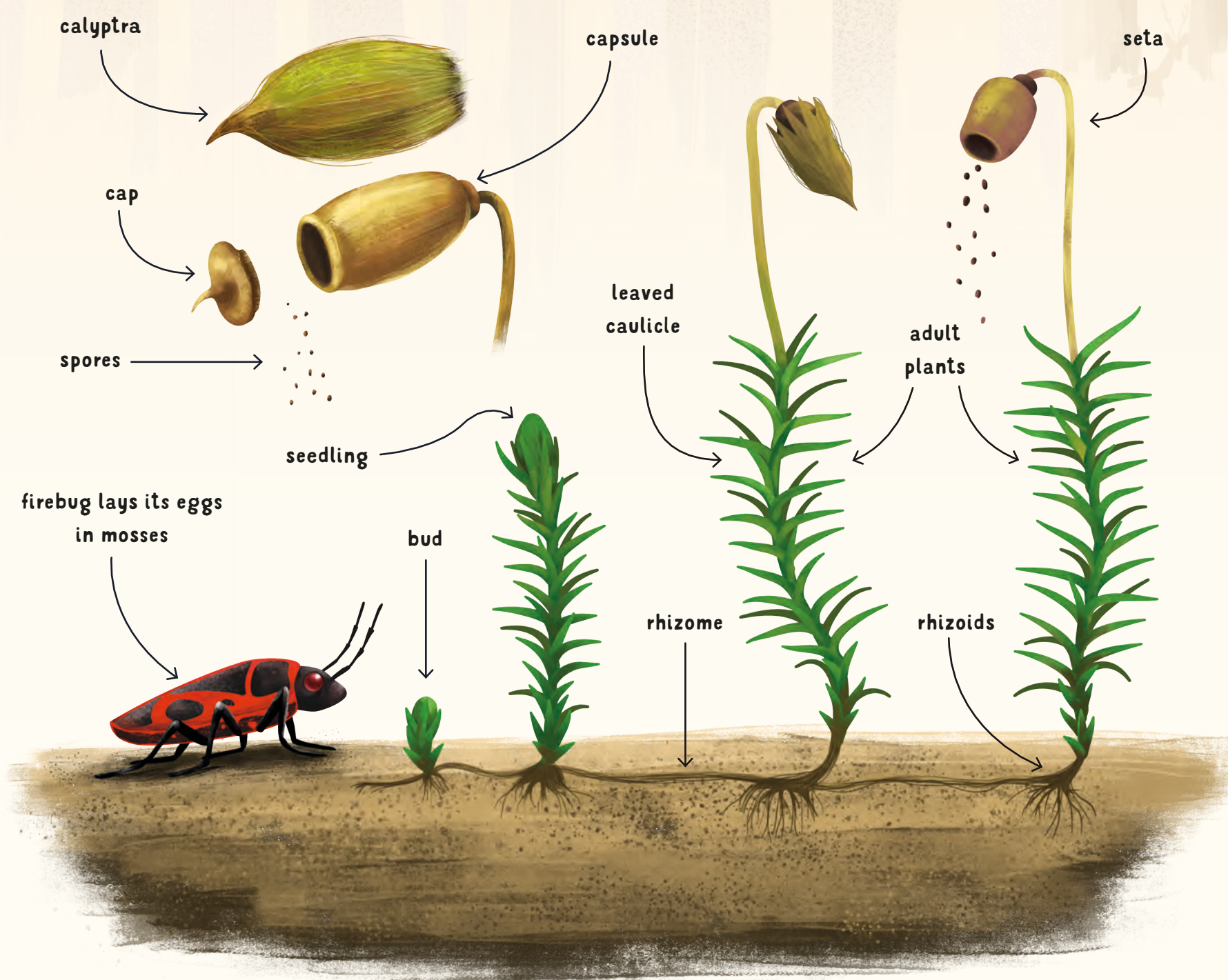
An expansive plant that can shoot its ripe seeds at distances of up to several meters!

FOREST HERBARIUM

Are you wondering which forest plants and flowers Hansel and Gretel may have been admiring? In the forest, you can find plants of many different shapes and sizes — from towering giants to bushes, ground herbs, or individual parts of mosses that are barely visible to the naked eye.

Moss

It's **everywhere in forests**, though you don't always notice it — an inconspicuous green plant that **sticks to the ground**, called moss. Moss **retains** the all too **important water**, protecting the forest from going dry. At the same time, it **provides shelter** to many small animals.

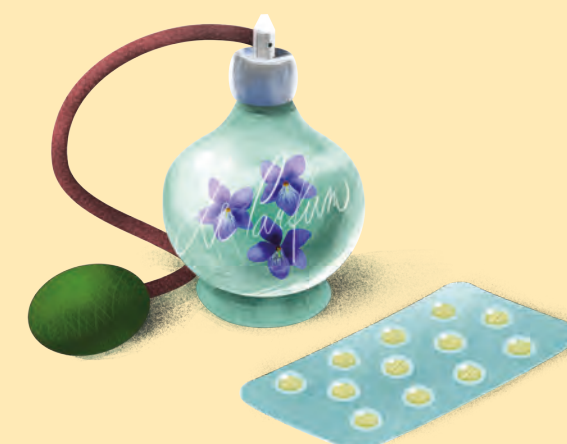


Herbs and woody plants

Plants can be divided in two groups, depending on the type of stem — **woody plants**, and **herbs**. Woody plants have a **woody stem** while herbs have a **fleshy one**. Taking into account the way a stem grows, herbs are classified either as creeping, erect, or climbing.

Plants with various properties

Forest plants have **various properties** that find their use in many **different spheres of activity**. Healing herbs are used for **making medicines**, other ones are good for **cosmetics**, and yet other ones are great for **eating**. Some are even **toxic**.



Blooming or not

Over the course of a year, some plants bloom. These blooms then turn into fruits which contain seeds. Other plants **don't bloom** at all and reproduce with spores. These are called **non-blooming plants** and include **mosses**, horsetails, or ferns.

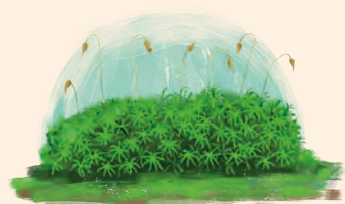
Preferences for different places

In the forest, there are places with **different growth conditions** — sunny clearings, shaded thickets, or damp soils by brooks. **Each of these places** has its own **characteristic plants**, though some types of vegetation **aren't picky** and can grow in **various locations**.

Plants in shaded places

Looking for shade

Not all plants love **the sun**. Some are happier in **the shade** or **half-shade** where they thrive the most. Those are often hidden somewhere beneath bushes, in dark thickets, or dense forests.



Golden maidenhair

A deep green moss which grows through the ground, rocks, and dead tree trunks.



Solomon's seal

A tall herb with beautiful white blossoms shaped like bells which later turn into poisonous dark berries.

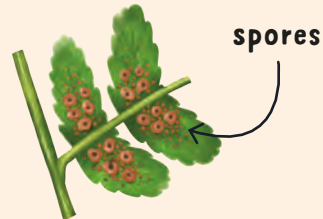


Periwinkle

This inconspicuous plant with tiny blossoms loves to form ground growths. It's both medicinal, and mildly toxic.

Ferns like the shadow, too

Typical fans of shaded forest places. Just like mosses, they too reproduce with spores.



Male fern

The bottom part of this plant, a typical member of the fern class, is covered with spores. The plant is toxic.



Plants in clearings

What clearings are

In forests, there tend to be locations where trees have been **felt**. These are called **clearings** and are a **good place for plants** which would otherwise never grow in the forest since they need **lots of sunlight**. Often, they're dominated by a single species which forced the other ones out.



Foxgloves

Strongly toxic plants which can be used to treat heart conditions.



Nightshade

A strongly toxic plants which can be mistaken for edible berries!



Violet

It has characteristically purple blossoms that give off no smell. Its seeds are a favourite treat for forest ants.



Lupin

A tall plant with a raceme of beautiful flowers whose colour variations contain toxic seeds!



Centaury

This medicinal yellow plant has a strong bitter taste and aids digestion.



Willowherb

A medicinal plant with purple blossoms which is used to treat urinary issues.

Hansel and Gretel headed straight for the house, to make sure their little noses weren't lying to them. And they weren't. No wonder the house smelled so sweetly! It was made entirely out of gingerbread! Naturally, the children peeled a few bits off as a dessert. But oh-oh! The cracking of a gingerbread roof tile alerted the witch who lived inside. "Who is nibbling at my little house?!" she yelled and stormed outside, furious, wide-eyed, teeth bared, and waving her walking stick. No wonder that Hansel and Gretel made a bolt for it and off they went! They ran as fast as they could, from the forest to the meadow, the witch hard on their heels.

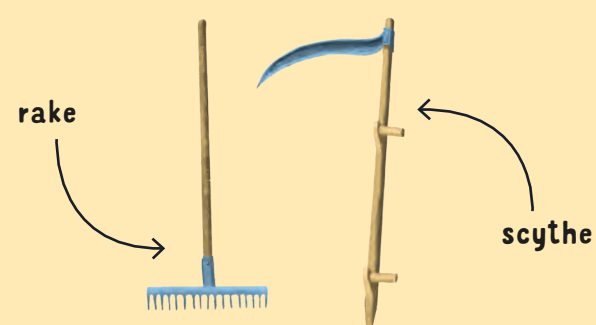


What is a meadow?

A **grassy space** that's covered with many kinds of herbs — that's a meadow. There, you can find **specific kinds of plants** which would be hard to encounter elsewhere. At the same time, meadows are **necessary** in order for certain free-ranging animals **to survive**.

What is a pasture?

Pastures are actually special meadows where farm animals **graze** (such as horses, cows, or sheep). Often, there are plants which constitute **an important part** of the animal diet — fodder crops. Since these nutritious plants are being constantly gnawed at, they **don't manage to grow too tall**.



How meadows and pastures are used by people

Meadows and pastures are often used for **agricultural purposes**. The grass is eaten by farm animals, certain **meadow flowers** can be used as **medicine** or to make **ornaments** and **decorations**.

MEADOWS & PASTURES

While Hansel and Gretel dash off, we can slow down to see what other interesting things meadows and pastures have to offer.

If you step outside the forest, you may be able to find a few grassy meadows or pastures with farm animals. Those are charming, too, since they include many interesting plants that'd be hard to find in the forest.

Hay, aftermath

In the summer, animals have no lack of grass. But come winter, they need **hay**. First, the grass is cut down and dried, usually at the **start of the summer**. By the end of the summer, meadows are mowed a **second time**. This grass is softer and it's called **aftermath**.



Straw

People tend to mistake hay for straw, though the two are very different. Straw is made by drying the stalks of cereal plants. It's gold in colour.



Types of meadows

Meadows can be distinguished by **the amount of water** the soil contains which then has an effect on the types of plants which grow there, or by their **regions**. There are **wet** meadows, **harsh** steppes, **arid** meadows on southern slopes, or **mountain** (alpine) meadows.



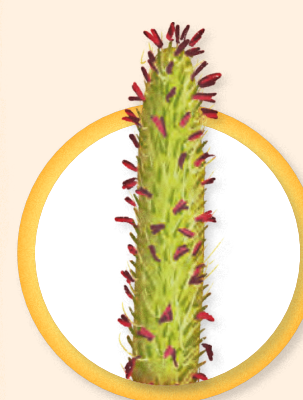
mountain (alpine) meadow



wet meadow

Grasses

These, mostly short, plants are common **all over the world**. There are many kinds of them. In meadows, they cover **vast areas** and their roots help retain **water** to a large degree. Grasses form **inflorescences** which consist of spikelets. Their fruit is called **caryopsis**.



Timothy grass

An undemanding grass that can withstand harsh temperatures.



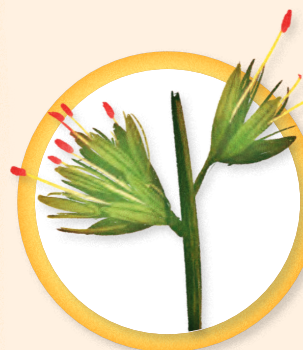
Red canary grass

A tall grass which forms growths in wet regions.



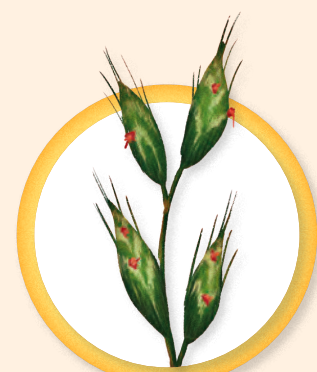
Orchard grass

Orchard grass is favoured as a food for farm animals to graze on.



Soft brome-grass

A quick-spreading weed which can damage an animal's digestive tract.



Grassland plants

Pastures are a **good place** for the kind of plants which can handle being **gnawed** at and **trampled** upon by animals. On the other hand, meadows offer **unique conditions** to other plant species — some can be found in sunny mountain meadows, other ones around rivers, and yet other ones in arid steppes.

They're most enjoyable in the summer since blooming meadows are full of colour and are a true feast for the eyes.



Moon daisy

A typical meadow flower with white blooms and a yellow centre. It looks very nice in flower arrangements.



Mouse-ear hawkweed

It grows in dry soils and likes to spread at the expense of other plants.



Meadow clover

A plant with pink blooms and characteristic three-leaflet leaves, it's often used as a medicinal herb.



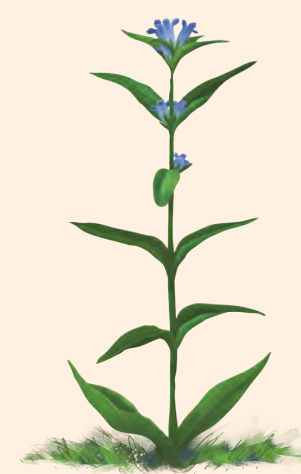
Stemless carline whistle

A short plant with prickly leaves. It can be found in arid meadows.



Tufted vetch

A pleasantly smelling, undemanding plant whose seeds are a favourite treat of birds.



Cross gentian

A plant with blue blooms, it prefers arid meadows.

Observing the Plants of the Forest with Hansel & Gretel

Text by Sabina Konečná & Lenka Adamová
Illustrations by Jakub Cenkl & Tomáš Kopecký

Not far from a deep forest there lived mom, dad and their two children – Hansel and Gretel. And because Hansel and Gretel had always been little fidgets, it was no wonder that one day they got lost deep in the woods and while trying to find their way home they came upon a witch's house made of breads, cakes and sugar! What plants did they see during their wandering in and out of the forest? You can get really interesting information about the forests, fields and meadows in this richly illustrated book *Observing the Plants of the Forest with Hansel & Gretel* which is a unique combination of a fairy tale and an encyclopedia.



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Illustrations © Jakub Cenkl & Tomáš Kopecký
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CE

WARNING:
Choking hazard.
Not suitable for children
under 36 months.

