

Sonja is spending her summer break at her grandmother's at the forest. With her friend Simon she discovers exciting things like a true discoverer. They realize that it is not important what tree does something best, but that they are the strongest together. Unity is strength.

FOREST DIARY

TEXTS: MAŠA OGRIZEK

ILLUSTRATIONS: SLAVICA DANIČ

INTERACTIVE
BOOK



LIFE FOR EUROPEAN FOREST GENETIC MONITORING SYSTEM



REPUBLIC OF SLOVENIA
MINISTRY OF THE ENVIRONMENT
AND SPATIAL PLANNING



GOZDARSKI INŠTITUT SLOVENIJE
SLOVENIAN FORESTRY INSTITUTE

The book you are holding in your hands is magical.
If you follow these steps, it will come alive!

1. Look for a BigForest app in the App or Play Store

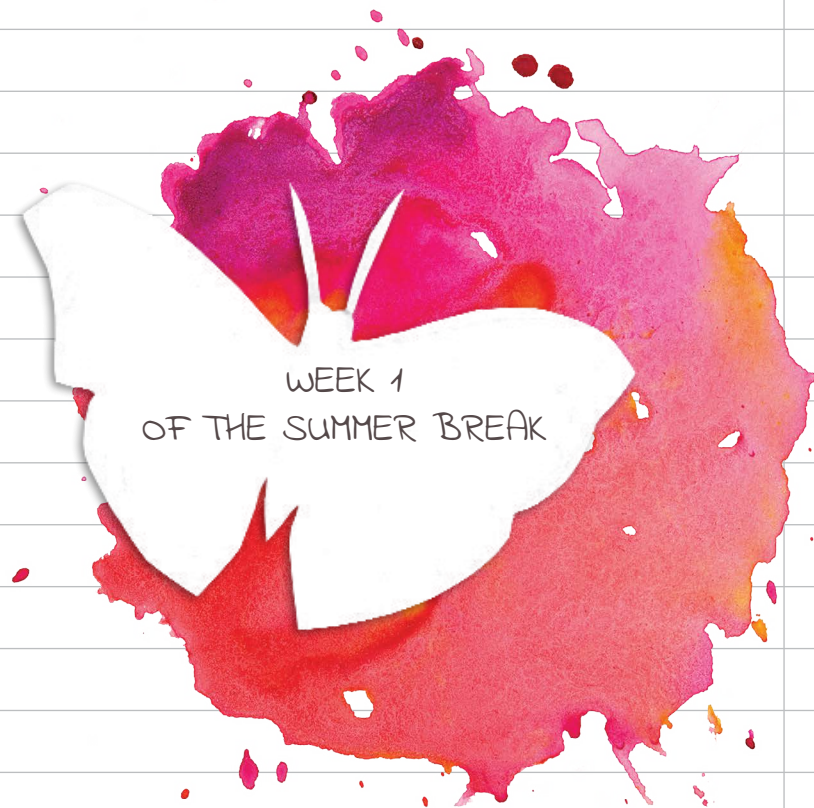
and run it.



2. Look and scan with your phone or tablet all the pages in the book with your which contains the BigForest logo - a surprise is waiting for you.


Enjoy the treasures hiding
in the woods!





Saturday

THE COOLEST DAY IN THE WORLD!!!

School's finally over! I could hardly wait. When it's sunny  outside, I feel like the classroom is my prison. Well, to be honest, sometimes I feel that way even when the weather is not so nice. I want outside, to get some fresh air, go under the treetops! As it turns out, my wish came true 😊.

Dad brought me to spend my summer break at my grandma Franja's cabin in the middle of the forest.

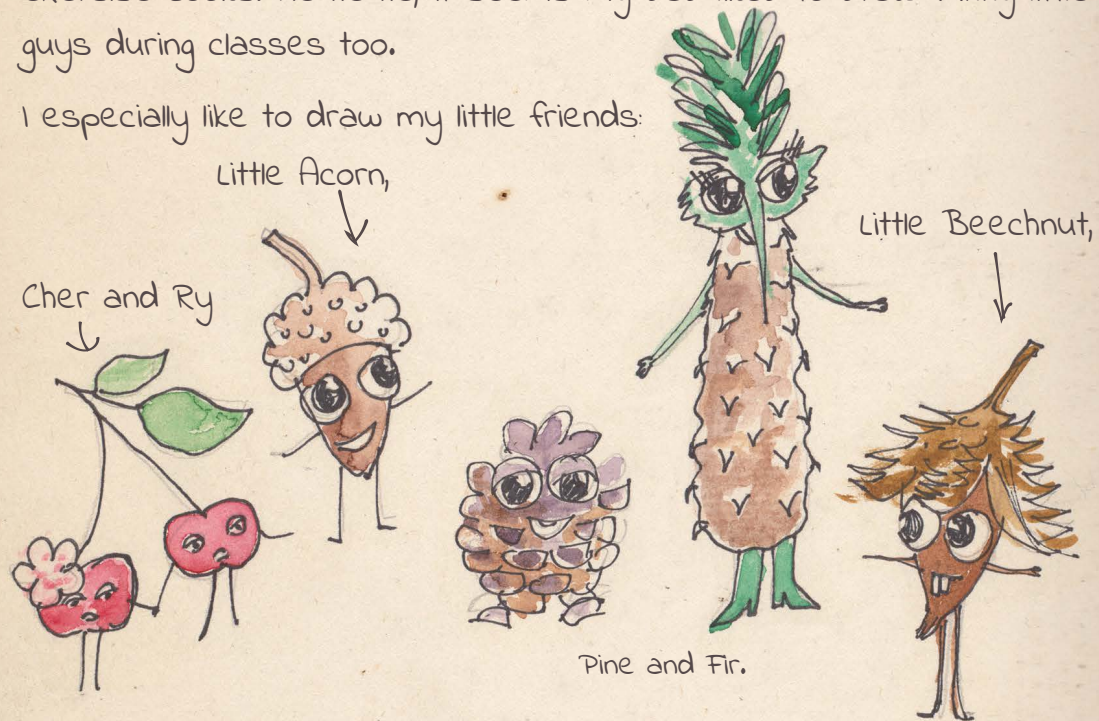
Grandma never asks me about school. Thank God! She says life is the best teacher. Yes, if I had one! But instead I am stuck with books all day. She likes to joke: what came first - a tree or a book? Well, she should tell this to my English teacher, who is convinced that the entire wisdom of the world can be found in books.

At the end of the school year, grandma always gives me a cool present. This year, she gave me this notebook and wrote FOREST DIARY on it in her old-fashioned writing. I will use it to write down everything that will happen to me during this summer in the forest.

Sunday, RECYCLING

Grandma made the diary herself. She has a large waste paper basket under the kitchen table. She always saves the empty pages left behind from my exercise books. Some pages in the diary are already yellow with age because they come from my dad's old exercise books. He he he, it seems my dad liked to draw funny little guys during classes too.

I especially like to draw my little friends:



My exercise books are full of them. My teachers nag me about it non-stop. Except for the biology prof, who loves nature and is over the moon that anyone is even still interested in trees. My stupid schoolmates constantly stare at their phones and computers. They never even leave the room. And they know nothing about trees! Most of them do not even know that a BEECHNUT grows on a BEECH TREE and an ACORN on an OAK TREE. Can you believe this?

Well, truth be told, I would know a lot less about the forest too, if I would not be visiting my grandma at the forest ever since I was little. But still - they could at least search for photos on the web, if they are too lazy to go into the forest themselves.

Tuesday

FRIENDS OR FOES?

Immediately after eating my breakfast in the morning, I went to 7 Oak Street to visit Little Beechnut, Little Acorn, Cher and Ry, Pine and Fir and other residents of the apartment building. I haven't seen them in forever and totally missed them. But when I arrived there I was in for a surprise. A shocking one! We said goodbye as friends, but now they are not even on speaking terms! I could hardly find out what happened. Then I tried to put together the whole story out of individual ones.

Where do I even begin? Little Beechnut and Little Acorn have seriously fought with Pine and Fir. And why? Because the former two are deciduous and the latter two coniferous trees. Hello?! That's as clear as day! What's the deal with that? Little Acorn and Pine are now first graders at the forest school. In treeology they learned about the differences between deciduous and coniferous trees. I don't know what exactly their teacher, Hu-hu the owl, told them, but she definitely did not tell them what Pine and Little Acorn are saying.



THIS PHOTO WAS TAKEN DURING LAST
YEAR'S BREAK - BACK THEN WE WERE ALL
BEST FRIENDS FOREVER!
AND NOW THEY ARE ALL BEST FOES
FOREVER! THAT'S RIDICULOUS!

Friday,

WHO'S THE LOSER?

Pine says coniferous trees rock and deciduous trees are losers. He teases Little Acorn that coniferous trees are a lot older than deciduous trees and boasts that coniferous trees have lush hair even in winter, while the leaves of deciduous trees fall off in the fall, until they get completely bald. But the Little Acorn can definitely hold his own. He says that the bare deciduous trees are more resistant than the coniferous trees, because they cannot get harmed by the snow and the ice. Besides, they get new leaves every spring and do not always carry the same stinky needles. Hmm, which one of them is right? I asked my grandma.

At first, she just shook her head, shocked that forest creatures apparently aren't any better than people. Instead of welcoming diversity, they constantly compare themselves to each other and compete. But she soon calmed down. She says that Little Beechnut and Little Acorn are still only children and they have the right to act childish. Then she told me some interesting things about coniferous and deciduous trees. I'll just write them down here, so I won't forget them.

$$\frac{2x-5}{3} = 5 + \frac{1-3x}{2} \quad x = ???$$

CONIFEROUS TREES

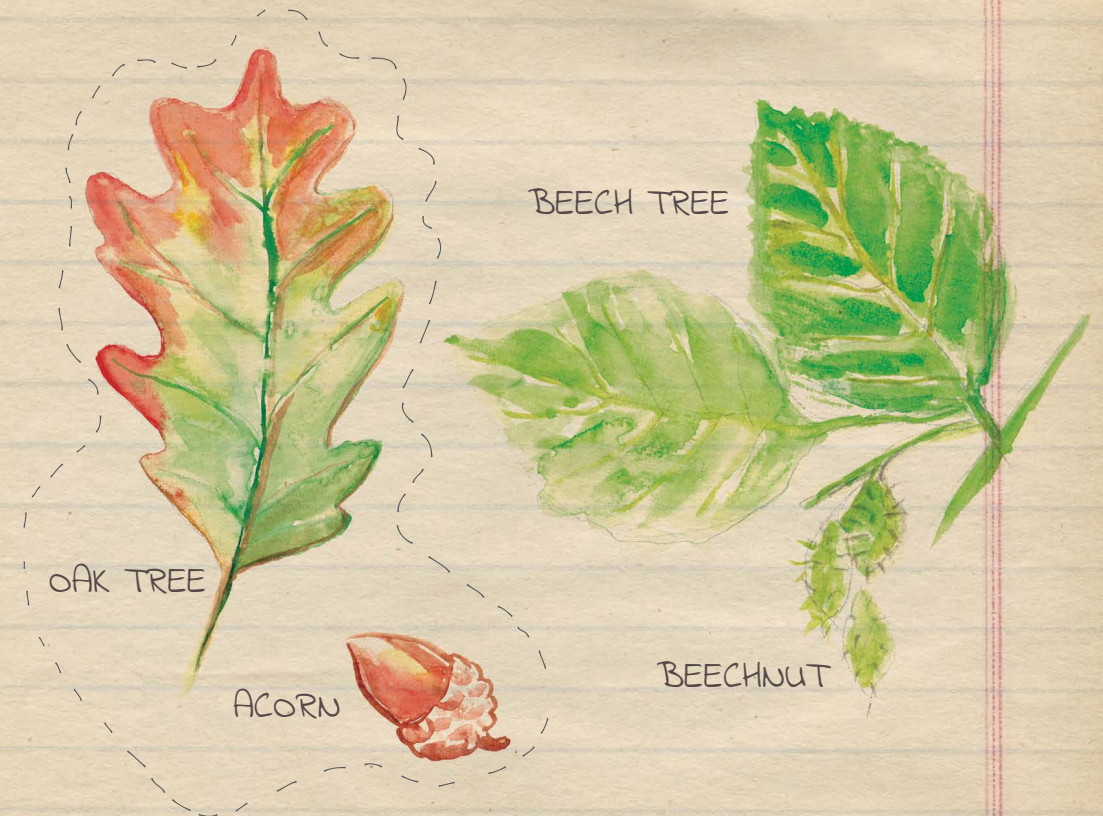
- they first appeared approximately 300 million years ago
- in winter, the needles contain an anti-freeze substance
- the surface of the needles is coated with a thick layer of wax
- spruce, pine and fir change their needles (but not all at once!)
- in winter, larch drops all its needles

DECIDUOUS TREES

- they first appeared approximately 100 million years ago
- in fall, their leaves turn yellow, brown and red and then fall off
- every spring, a single tree forms several hundred thousands of leaves
- the trunks and the branches are shaped to alleviate the gusts of wind

new word EVERGREEN

= IF YOU ARE GREEN ALL YEAR ROUND
(LIKE MOST OF THE CONIFEROUS TREES)





Sunday

ANTS AND COWS

Oh no! Yesterday I fell asleep, so I couldn't tell you who has fought at the apartment building at Oak Street. Even Fungus the janitor and the ants from the ground floor are constantly arguing. And it's all the cows', sorry, the aphids' fault, because they have supposedly dirtied the facade of the apartment building. At least this is what Fungus says. Oh well, it's complicated, let me start at the beginning.

In spring leaf aphids have populated the crown of the old oak and they drink sweet tree nectar from the veins of the leaves. They excrete what they don't digest on the other side. Thus sticky rain is falling on the trunk and the branches, as well as on the floor under the tree, which makes janitor Fungus very mad. And what do ants have to do with this? The ants protect the aphids from ladybugs and other predators that would happily eat them. Whatever for? Grandma told me that ants like the sweet nectar they sip straight from the aphids' behinds. Ew! Grandma said that the aphids mean something similar to the ants as cows do to us. They "tickle" the aphids with their tentacles, which makes them "pee".

OMG.

I am so happy I am not an ant. It must be terrible to drink other animals' pee. I could never do that! However, grandma teased me that I have done it this morning, in form of a bread spread.

WHAAT????!!!

I only found out today that bees also suck the sweet drops and take them to the hive, where they spit them out again and process them to dark forest honey. And they say fast food is unhealthy. Grandma only laughed and told me not to take everything so literally.

She tried to persuade me that forest honey is actually very healthy. Still, I think I won't eat it for a while.

HiHiHi



Monday

FOREST INTERNET

Janitor Fungus went completely crazy because of the aphids. And now he is trying to get back at them by disconnecting the internet for the residents of the entire apartment building. They are literally cut off from the news. It doesn't even help that they are begging him and telling him that he is putting them in danger, since they will not be informed about possible dangers in time. Me and grandma also do not have WiFi at the cabin, but I don't miss it at all. Well, it would be cool to chat with Simon from time to time over the internet. It was him that explained to me that there is also some kind of internet in the forest. The scientist call it the "wood wide web". The thin threads the fungi spread across the ground function like the optical fibres of the internet. Through them, the trees inform each other about the news, dangers, treats and neighbors. That's so cool!

HYPHAE = GENTLE, MICROSCOPIC SMALL TUBULAR FILAMENTS THE FUNGI ARE COMPOSED OF

DON'T FORGET!!!

- a thick network of fungal hyphae is called the mycelium
- in a tea spoon of forest soil there are several meters of hyphae
- the fungal mycelium can be up to 500 years old

Last night I was thinking about the revenge of janitor Fungus, who has closed off the valves due to his fight with the ants. This is really not cool, because the neighbouring trees do not only transmit information through the fungal network, but also food. Next to the apartment building at Oak Street 7, there is a very old oak tree on No. 8, which is drying out. The mighty oak my friends live in supplies him with the food he needs to not completely die off. I sometimes bring my mom's soup to our neighbor who is living alone, too. And when she gets better, she thanks us by bringing us a jar of homemade jam.



I think it's really great that the trees help each other. And it's completely idiotic that Little Beechnut and Little Acorn are fighting with Pine and Fir. And janitor Fungus with the ants. I have no idea what to do so they make up again. I am going to visit Simon soon, perhaps we can think of something together. That's what friends are for!

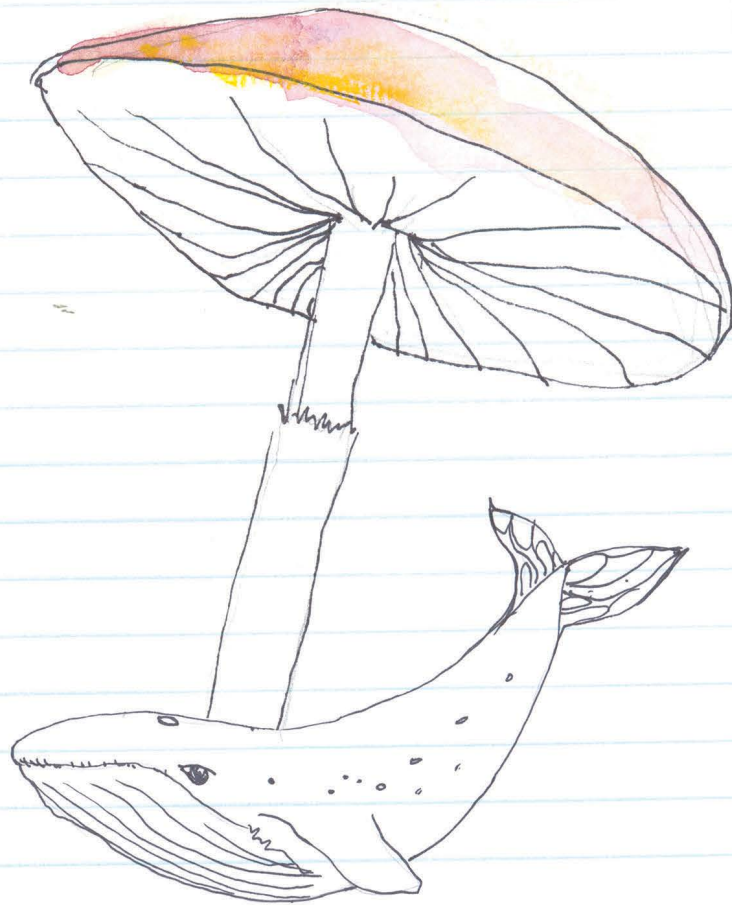


Tuesday, TREE MONEY

Due to the quarrelling dummies I have not been myself lately. Grandma told me to calm down, because Fungus will open the valve, when he will get hungry. If you ask me, that will happen quite soon, since he really likes eating a lot, hehe. And he has a very big family, too. I completely forgot that the fungi are not capable of photosynthesis, so they cannot produce food on their own. Grandma jokes that they do not have their own garden but have to buy all their food at the store. And how do they pay the trees?

Grandma said they return the favor by helping them pump precious nitrogen and phosphorus from the ground. Besides that, they also filter the harmful heavy metals and act as some sort of a health service, chasing away the bacteria and the "bad" fungi. That's so cool! I can see now that Fungus is not only a janitor, but also a healthcare and computer technician, so he and his family truly deserve a sweet reward. This is probably why he has such a round belly, hehe.

wednesday: MUSHROOM OR WHALE?

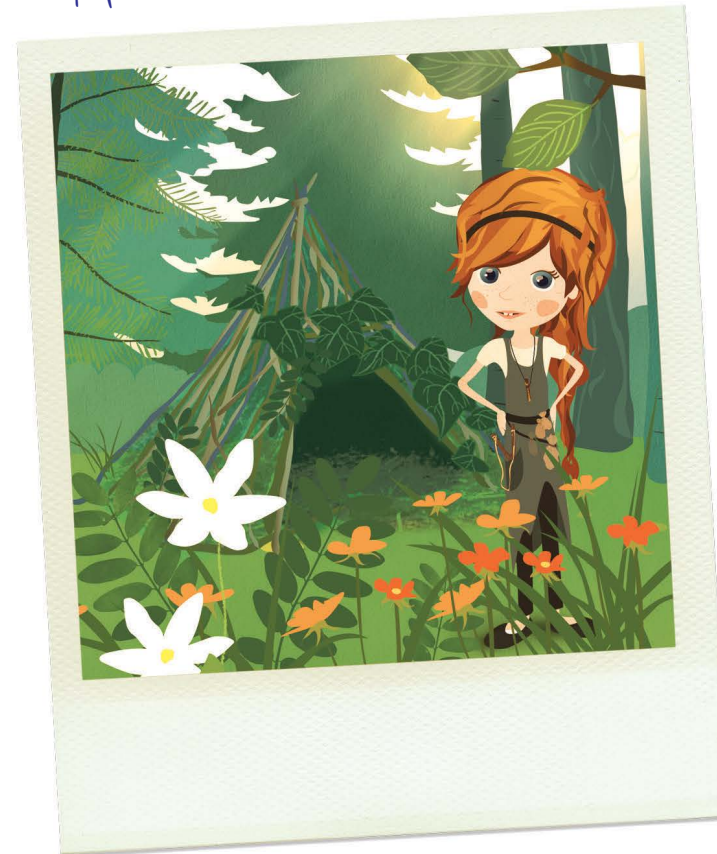


I have the best riddle for Simon! He's crazy about things like that. Here it is: what are the largest CREATURES in the world? I can already see him boastfully say BLUE WHALES. But the right answer is FUNGI !!!!

The largest of them can grow over several square kilometers and are more than THOUSAND years old. That's crazy!

Friday, A ROOM, MADE FROM BRANCHES

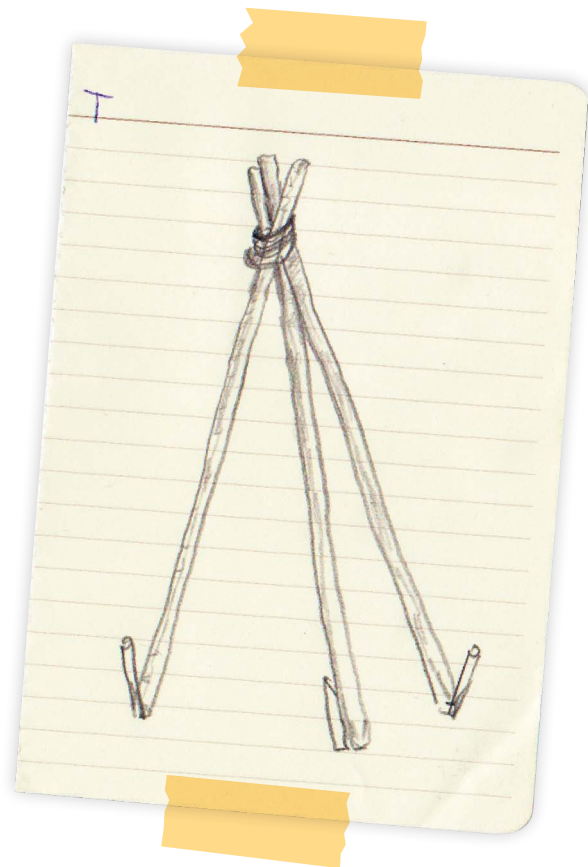
I did not have the time to write into my forest diary for some days now, because I was too busy! Grandma allowed me to set up a tent made of branches in front of the cabin. When I was visiting Simon, we found a plan on the internet. And on the next day we got down to work. The tent is phenomenal! If you ask me, we could win just about any scouting competition. And I finally have my own room and peace! OK, I still sleep at my grandma's at the cabin, but read, draw and write my diary at the tent. The tent is also where I keep my research equipment. That is of true value!



♥
I am so proud of our tent! I took the photo with my Polaroid, since I always have it with me!



PLAN FOR A TENT MADE FROM BRANCHES



NECESSARY EQUIPMENT FOR A FOREST ADVENTURER

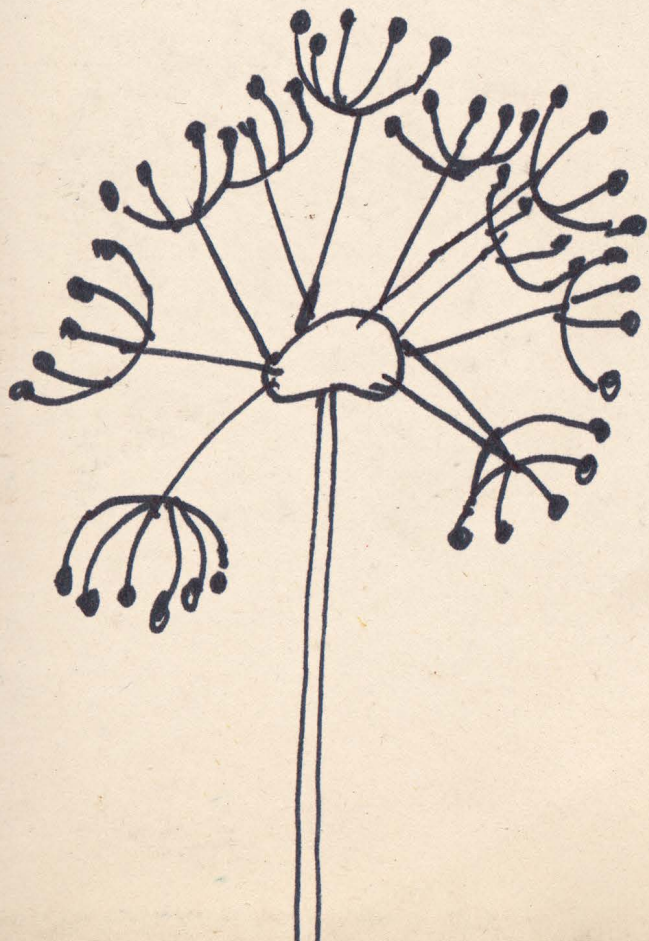
I HAVE:

- FLASHLIGHT
- CAMERA (POLAROID)
- BINOCULARS
- COMPASS
- PIECE OF ROPE
- LINEN BAGS
- SLINGSHOT
- MAGNIFYING GLASS
- SLEEPING BAG
- POCKET KNIFE
- PLASTIC BOTTLE WITH WATER
- FOOD CONTAINER, FORK, SPOON
- TWEEZERS
- PROTECTION FROM TICKS
(LONG-SLEEVED CLOTHES, HAT
AND BUG SPRAY)

MISSING:

- MAP
- BOOTS
- ANORAK

WEEK 3 OF THE SUMMER BREAK



Saturday, BROTHERS AND SISTERS

At home, I have to share my room with my little sister Tinkara. I am soon going to be twelve years old, while she is only three. She always scribbles in my school books and disturbs me when I talk to Simon over the internet. I will have to hide this diary really well, so she doesn't destroy it. Who needs little brothers and sisters?! My dad has been promising me for ages that he will arrange a room for me at his study. But it is still crammed full of books and paper. Oh well, at least no one bothers me at the forest.

Now Simon will get a little brother or sister too. This is what his mom told me last time, while rubbing her enormous belly. How corny! And what is it like with the trees? How many "children" can they have? I'll have to ask grandma. But before that, I have to create a secret password for entering the tent. Something not every baby will get. Something only forest adventurers understand.

SECRET
PASSWORD:
CAMBIUM

Sunday TREE CHILDREN

Today, Hu-Hu the owl explained to me in detail about tree children. If I am honest, I didn't get everything. It's really complicated. I'll just write down what it's like with the oak and the beech tree, since I know Little Beechnut and Little Acorn and I can imagine it better.

My mom had me at 25 and Tinkara at 34. It is quite common for women to have children around the age of thirty. Well, Little Beechnut's mother Beech was 100 years old, when she shook Little Beechnut and his brothers out of her thick crown in the fall. OMG - a hundred year-old mommy! But since beech trees live for more than 300 years, she was not actually very old.

And that's not all! The beech and the oak tree can have "babies" - that is beechnuts and acorns - every few years. The beech tree on average every five years and the oak tree every two to three years. Every beech or oak tree can have more than 10,000 Little Beechnuts and Little Acorns in a year. And for people it is already big news if someone has triplets. In the entire tree life that makes more than a million "babies"! That means Little Beechnut and Little Acorn COULD have more than a MILLION brothers and sisters. That's crazy! And I am complaining about ONE baby sister.

Monday,

THE WIND AND THE BEES

When I was telling grandma about tree babies, she said we needed to talk about the birds and the bees. I started laughing and told her I knew how babies are made! I really did not need her telling me about storks! But instead of that, grandma really talked about the bees! And the wind. Before little babies grow on the beech or oak tree, trees have to blossom and get pollinated. While the beech and the oak tree get help from the wind to do that, some other trees get help from the bees.



Hmm, it's a little complicated.

I'll draw a mind map, so I can remember it better:

So, trees can be divided into:

MONOECIOUS TREES - the male and female flowers are on the same tree.

DIOECIOUS TREES - the male and female flowers are on different trees.

They can also be divided into:

WIND-POLLINATED TREES - pollinate with help of the wind

INSECT-POLLINATED TREES - pollinate with help of the insects, especially bumblebees and bees.

Tuesday
LOVERS

I imagine that on some trees men and women live in the same house, while on others women live in one house and men in the other. And lovers then don't visit each other with bikes and cars like we do, but on the wings of the wind or the insects.

How cool is that! And then in time babies grow. Oh well, it's kind of similar as with people, hehe.

Grandma explained to me that it is great if the trees that are in love with each other are as GENETICALLY DIFFERENT from each other as possible. Or if we simplify: it is better, if they are not closely related to each other.

I'll make a sketch about what it is like for individual trees.

Among forest trees, monoecious and wind-pollinated trees prevail. Well, there really are not that many bees in the forest.



BEECH - monoecious, wind-pollinated

BIRCH - monoecious, wind-pollinated

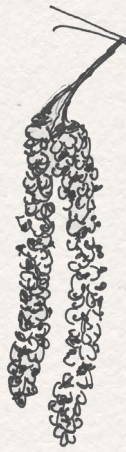
FIR - monoecious, wind-pollinated

WILD CHERRY - monoecious, insect-pollinated

MAPLE TREE - monoecious, insect-pollinated

And I found out even more interesting things today. Speedy the squirrel told me that not only hazelnuts, which she absolutely loves, are edible on the hazel tree. People can also prepare a delicious and VERY HEALTHY meal from catkins. At first I was sure she is just pulling my leg, but grandma told me it's true. And she also gave me the recipe.

CHOCOLATE-COVERED HAZEL CATKINS



- Pick young hazel catkins.
- Soak every (uncooked) catkin in molten chocolate.
- Lay the chocolate-covered catkins on baking paper and put them in a cool place.
- If you wish, you can sprinkle them with coconut and serve cold.

INTERESTING FACT:

100g OF RAW CATKINS CONTAIN APPROXIMATELY 100mg OF VITAMIN C, WHICH IS MORE THAN TWICE AS MUCH AS LEMONS!

wednesday, DEADLY KINDERGARTEN

Even when the tree lovers wither away and their babies are born, the road to becoming a tree is still VEEERY long and DANGEROUS.

When acorn and beech fall to the ground in the fall, wild pigs, roe deer and red deer start to lick their lips. They think they're so tasty, like chips and popcorn to me. And they can eat enormous quantities too. They don't care if they get fat, but are even happy to have stocked up with fat for the winter.

Some beechnuts and acorns, which do not end in greedy mouths, sprout into small trees in the spring. But those too can be a true treat for some animals. Sometimes though, the soil is too dry and they dry out. Now I feel really sorry for the little ones! They have to survive all these



deadly dangers while still in the kindergarten!

Thursday,

WEIRD PARENTS

Can you believe this? Not only are the tree babies threatened by plenty of dangers, even their own parents threaten them! They have to grow in their shadow for what seems like an eternity. Mother Beech or father oak, for example, leave very little light for their little ones. They leave barely enough so they can make it. That's so nice of them! I mean, how nice of them! Great mother and father! My parents get on my nerves from time to time too, but at least they don't lock me in a dark basement.

Grandma says they do this out of pure love. Well, I don't think this is kind at all.

I'll ask Hu-hu the owl what the deal is. Even though I could hardly wait to visit grandma and escape my baby sister, as well as daddy and mommy, I now miss them a little. I can see now they're not that bad. I'll glue a photo from Tinkara's last birthday to have a memory of her.



Friday, AS SLOW AS SNAILS



OK, Hu-hu the owl explained to me what the catch is.

Trees are not really as cruel as I first thought, but they certainly have interesting methods of upbringing. I think the tree parents would really get along well with our PE teacher. He loves discipline too and is crazy about correct posture. Sometimes, he tries to be funny and yells: "Camel!", if someone has poor posture. Haha, this is so NOT funny.

This is what Hu-hu the owl told me: large trees intercept almost all light, so most of the baby ones slowly die due to lack of light. The most enduring kids, however, prepare a humble meal with the help of photosynthesis so they do not grow very fast. Hu-hu says the tree parents want their offspring to grow slowly because that makes them healthier. My mom is the exact opposite. When she's tired, she sighs and says she can barely wait until Tinkara and I finally grow up so she can have time for herself again.



Grandma also says that the wood of the trees which grow slowly is more dense and tough. Such trees are more resistant to natural disasters and their wood also has some other cool characteristics. For example, the wood of spruce trees, which grow slowly and thicken only by one to two millimeters a year, has great acoustical properties. Thus it is great for making instruments.

WEEK 4 OF THE SUMMER BREAK



Saturday, GREAT IDEA!

Because I have been thinking about brothers and sisters and mothers and fathers so much lately, I suddenly realized that Little Beechnut, Little Acorn, Cher and Ry are orphans. Little Beechnut often tells the story about The Great Frost, which knocked down the trees they grew on. Most of the other trees at the city park they lived in was also knocked down that winter. So the foresters planted new ones. From then on, my little friends lived under the hazel tree, in a cookie box, until Simon found them and brought them here, into the forest.

While thinking about this, I got a genius idea! I think it would be cool if the entire gang - including Fir and Pine and Speedy the squirrel - would go for a trip to the city park, where Little Beechnut, Little Acorn, Cher and Ry grew up. This would be a great excuse for everyone to spend some time together. And because we would have such a great time, the quarrelling little deciduous and coniferous trees would become friends again. Well, at least I hope so.

Let's get to it!

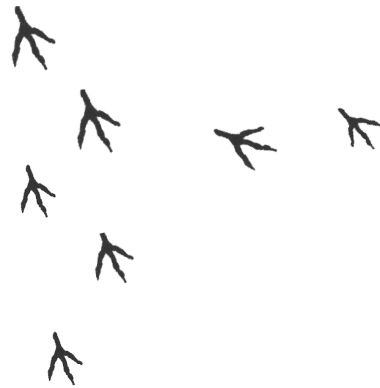
Sunday, TRUCE

Yay, everyone said YEEES! when I described my idea to the little fruits, they were jumping with enthusiasm. Cher and Ry started spinning around and squealing and Little Acorn was moved to tears, because he would finally see the home playground after more than a year. He kept repeating: "wittle Beechnut, I will go down the swide again, the swide, the swide," while Little Beechnut kept teasing him jokingly that he still cannot pronounce the L sound.

They were making such a fuss that Pine and Fir peeked out of their tree cabin. I was afraid they were going to start fighting again. But Little Beechnut only waved at them, as if nothing happened, and invited them for the trip into the city. Little Acorn, Cher and Ry started speed talking what they would do at the playground. Pine and Fir listened curiously to them all and happily nodded their head.

Now all we have to do is agree on when we leave.

As soon as possible! So they don't start boasting with their leaves and pricking with their needles again.

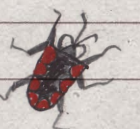


Monday, AMUSEMENT PARK

Oh wow, I am totally exhausted! I can barely hold my eyes open, but I quickly dropped by at the tent anyway and I am now writing my diary with a flashlight. We had a really good time at the park! I've never been there before, because we live on the other side of the city. Simon's school, however, is right next to it, so he passes it every day. Leading up to the park is a beautiful oak-lined lane. Even though the sun was burning hot, there was a nice shade in the lane and it was nice and cool.

However, at the playground there are fewer trees, and since they are small too, the sun was beating down like crazy. Well, we did only get there at about eleven - when the heat is the worst! No matter that we all agreed yesterday to leave the apartment building at Oak Street early in the morning, when it is still cool. But it took forever to pack everything.

At first, Little Beechnut couldn't find his skateboard. And he would not move without it. Then, we couldn't agree on how we were going to get to the park. In the end, Little Beechnut and Little Acorn rode Speedy the squirrel. Cher and Ry drove in their car, which they have made on their own. Pine and Fir travelled in my pocket.



Because we arrived in the worst heat, we first had to rest on the benches in the park for a little while. Well, it wasn't all that bad. We had a picnic, because grandma prepared a whole heap of tasty food for us. It made us so full we just fell down on the benches. The little ones even took a short nap. While I was lying on the bench and looking at the crown, I noticed that the leaves are completely eaten. Whatever attacked them? I couldn't discover anything useful, not even using my binoculars. I picked up some eaten leaves with my tweezers and put them in linen bags I always carry with me. I will show them to my grandma tomorrow. Simon took some too, so he can search the internet about it. And then we'll compare what we found out. When the

heat let off, the real party began! Little Beechnut showed Pine and Fir different skateboard tricks. After that, they were all going down the slide. In the end, Simon and I built them a huge sand castle, where they were playing hide and seek, until they fell asleep in the sand. I put them all in my backpack and took them home.



Tuesday, STORM

I was woken up at night by terrible thunder and lightning. I was so beat I fell asleep at the tent. Some drops fell on my diary, but I could save it in the last moment and run into the cabin. Grandma woke up too. She reassured me that the worst of the storm is raging in the city and everyone in the forest is going to be fine.



AND HERE ARE THE PHOTOS FROM OUR TRIP.

WE REALLY HAD AN AWESOME TIME!!!





In the afternoon Simon came along to tell grandma and me that a terrible storm was raging in the city. In the tree lane we were sitting at just yesterday, a few trees fell over. What is it with this park?! Is it cursed or something? Here at the forest, there is no damage. The wind knocked down some dry branches, but that's all. Grandma Franja says this is no coincidence. Trees are safer if they are huddled together. She likes to lean on a friend's shoulder too. It's better than standing in a straight line like soldiers. And then falling as if someone shot them.

Thursday

FATTIES

Simon brought me this. He found it on the internet and printed it. I'll just glue it here. It looks like the tree lane was attacked by the OAK PROCESSIONARY. We did not see any caterpillars because they hide during the day and go feast in the evening. This is what we call UNINVITED DINNER GUESTS! AND TO TOP IT ALL OFF, THEY ARE GREEDY TOO.

Oak processionary moth

The oak processionary moths (*Thaumtopoea processionea*) measure from 25 to 35mm across their wings. The front wings are yellowish gray with 3 dark transverse stripes. The rear wings are yellowish white, the male has a gray transverse stripe. The caterpillar is bluish gray with a dark head and very hairy. It is whitish on the sides. On the upper side it has dark red spots.

The oak processionary swarms in August and in the beginning of September. The females lay from 100 to 200 eggs on the smooth oak bark (the trunks of the younger trees and the branches of the older ones). In the end of March or in the beginning of April caterpillars hatch out of the eggs. The caterpillars feed on oak leaves. They ex-

crete filaments and then make cocoons out of them in the forked bough or in another sheltered spot and rest in them in groups all through the day. They are active in the evening. At dusk, they go feed in the tree crown. When doing that, they move in a queue or in a procession, one after the other and in several lines, while the procession is led by one single caterpillar. While moving, they leave filaments behind. In the middle of July they pupate in the nest. After 2 to 3 weeks adult specimens develop.

The larvae mostly eat oak trees, but in case of a large multiplication they can transfer to other deciduous trees. The hairs contain a poison which causes skin inflammation.

THIS IS HOW CATERPILLARS MOVE IN A PROCESSION. JUST LIKE WE USED TO DO IN THE KINDERGARTEN WHEN WE WENT FOR WALKS.



I'M LUCKY I PICKED UP THE OAK LEAVES WITH TWEEZERS. IT SAID ON THE INTERNET THAT THE CATERPILLARS ARE VERY TOXIC. IF I TOUCHED THE LEAVES I COULD GET A RASH. MY EYES REALLY DID ITCH A LITTLE! GRANDMA ALWAYS TEACHES ME TO BE CAREFUL IN THE FOREST. WHICH IS NOT THE SAME AS SCARED! TREES AND PLANTS HAVE THEIR OWN WAYS OF DEFENDING THEMSELVES. CATERPILLARS TOO! EVEN TOUGH THEY ARE USUALLY NOT DANGEROUS TO PEOPLE, THEY SOMETIMES CAN BE.



In the afternoon Simon and I went to check out the damage in the park. We did not take the little ones with us. Wow, some trees are really broken! Simon says they will now probably have to cut the entire lane. Grandma says this is not good. And that it's not due to the branches, but the roots, that the trees fall over. The soil in cities is so compacted the roots cannot grow deep enough. It's as if I would be standing on the toes of one leg like a ballerina. Of course I would topple over in the first wind, not to mention storm.

And they're sick too. The caterpillars have supposedly spread so much because they love the sun. And there's plenty of it at the park. In the forest, where the tree crowns are most often huddled tightly together, the oak trees are in a safe haven because that kind of an environment is less interesting for the caterpillars. Everything is connected!



WEEK 5
OF THE SUMMER BREAK

Sunday,
DOG DAYS

Phew, it's crazy hot! They said on the radio there is a heat wave and it will be boiling hot all week. This is already the second week in a row. Thank God I'm at my grandma's in the forest. It's probably unbearable in the city. Well, our house is OK now, because we installed air-conditioning last year, even though my dad was totally against it at first. He says it's not ecological. But then mom said she can't do anything in such heat. Especially not cook. And then my dad gave in, because he loves food, hehe.

It is not hot in the forest, because there is shade due to the trees, which is completely logical. But the trees have some kind of air-conditioning too. wow! Grandma says that, if the heat wave lasts for as long as two weeks, the trees suffer too. Yesterday we went for a walk to Spruce Grove. We noticed that the trunks of large spruce trees are cracking.

So I ran to my friends at Oak Street, to see, if the plaster at their apartment building is cracking too. But luckily everything was OK!

Tuesday, SPOILED TREES



Grandma explained to me that spruce trees at Spruce Grove are cracking, because they grow on water-rich ground. Really?! This seems totally illogical to me! Wouldn't it make more sense if they cracked at the desert? But it's not like that at all! Trees, which usually have enough water, are spoiled. On the other side, the trees which are used to the drought are more cautious with water.

People in the desert save every drop of water too, while we, who have plenty of it, don't turn off the tap while brushing teeth and wash cars with drinking water ...And, when it runs out, we panic. Well, this is what it's like with the spruce trees, too. They are spoiled, because they can satisfy their thirst any time. Thus they are completely out of their element during the heat wave.



Today, I went to check out Spruce Grove again. Some spruce trees have more than one meter long wounds. This is dangerous, because through them, diseases can get inside of the tree easier. This is similar to when our wounds fester. It happened to me last year, when I fell with my roller blades really badly. At first, my wound festered and then a scab formed. I noticed in the forest that some spruce trees have black resinous scabs too.

wednesday

MODELS WITH GREEN HAIR

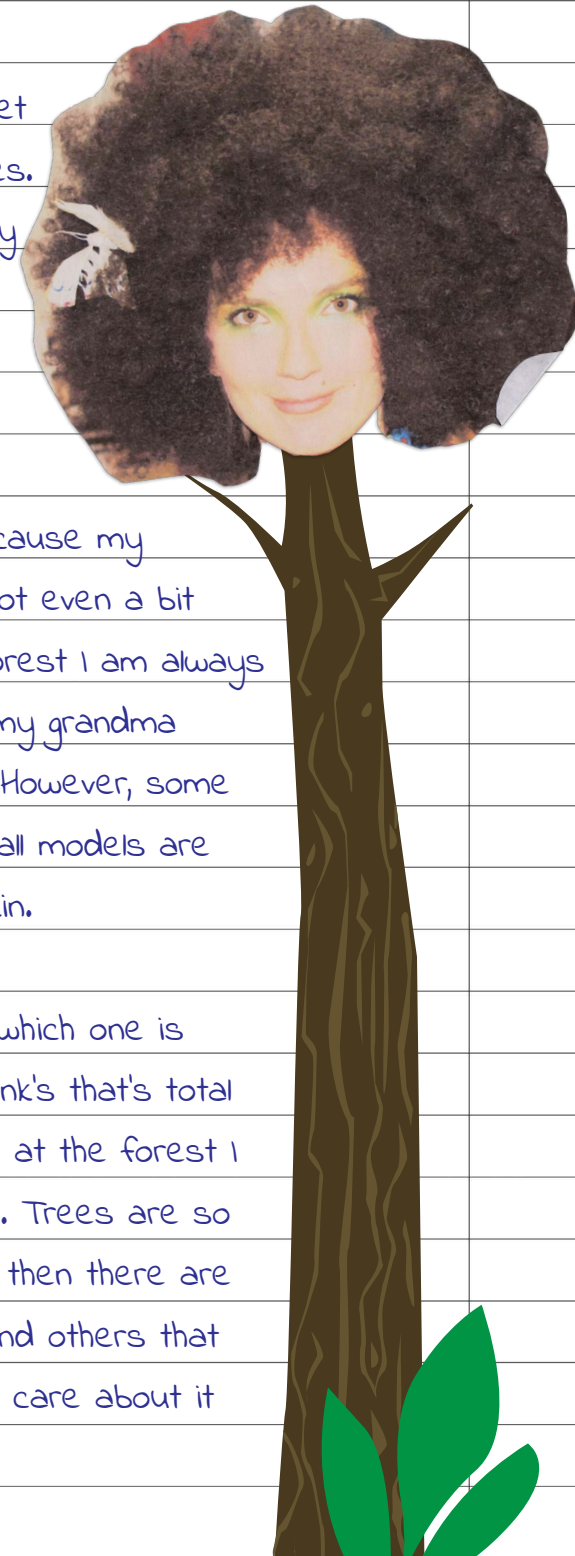
In my grandma's waste paper basket I also found some fashion magazines.

The old-fashioned models were truly funny to die for. The hair, hehe.

Back then, this used to be ultra modern, but now it just looks like something from the Stone Age. I've

never been at the hairdresser's because my mom cuts my hair. And I am also not even a bit interested in fashion. Here in the forest I am always wearing an awesome dress, which my grandma sewed for me, during the summer. However, some things have not changed even a bit: all models are young and have tight wrinkle-free skin.

Girls at our school compete about which one is more beautiful all the time too. I think that's total nonsense. During my summer here at the forest I can really relax from all the rubbish. Trees are so cool! Some are tall, others are tiny, then there are some that are completely upright and others that are gnarled ... And I don't think they care about it at all.

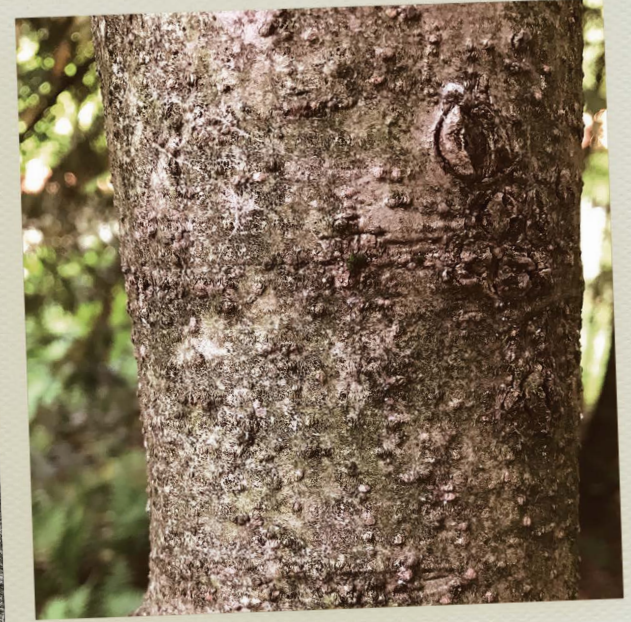


when I was looking at the old magazines, I was thinking about how nowadays everyone is obsessed with youth. But I think my grandma Franja is very beautiful, even though she is already very old. I love her wrinkles and long, gray hair.

Today I was observing trees in the forest. Young trees have totally smooth bark. But, when they get old, their bark cracks or "wrinkles". But not all trees get equally wrinkled. Just like people! For example pine, oak and birch trees get wrinkles very early on, while beech and fir trees stay smooth for a very long time. What a funny coincidence - our biology prof, whose name is Fir, is also quite old and has almost no wrinkles.

But the winner when it comes to smooth skin is definitely the beech tree. It has very beautiful silver-grey bark, which is very smooth, even when it is 200 years old. I asked my grandma what this is all about. It most definitely doesn't use night cream, hehe. Does it have a special youth gene, or something? Apparently, the catch is that it does not have dead bark, so its living bark completely fits the trunk. Thus it doesn't need to adapt with wrinkles, I mean, cracks in the bark.

There, I took photos of some forest supermodels.



Abies alba - SILVER FIR



EUROPEAN BEECH -
Fagus sylvatica



SILVER BIRCH
Betula pendula

Thursday,

SMALL BLOODSUCKERS



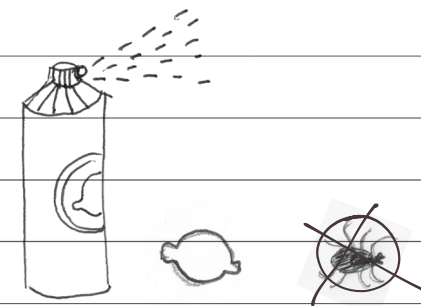
I love summer! This year I will spend seven weeks at my grandma's! My mom, dad and sister, however, are going to the seaside. I hate the crowd at the beach. And the sun burning like crazy. And having to use sunscreen all the time. What's the deal with that? I rather spend my time in the forest in the shade, so I don't have to wear sunscreen. I do have to use tick repellent, though. But luckily grandma made some homemade spray, which smells very nice and is supposed to be very efficient. Well, I thoroughly inspect my skin before taking a bath every evening anyway. I'll ask grandma for the recipe, so my mom can make it too. All I know is that it's made from CITRUSES. As it seems, ticks don't like sour lemons, but have a much bigger taste for sweet blood. Ew!!!

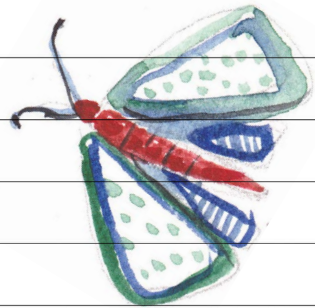
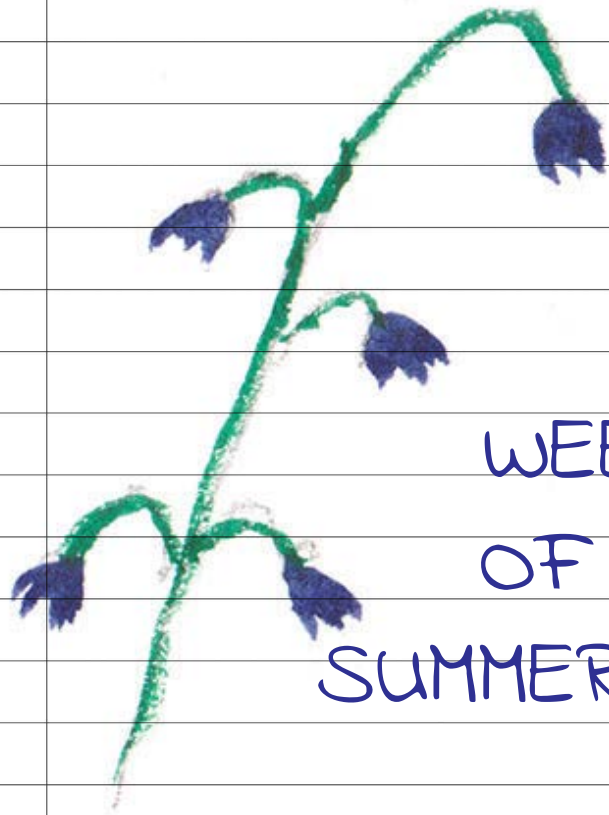


GRANDMA'S RECIPE FOR HOMEMADE BUG SPRAY:

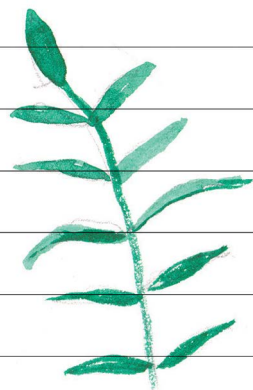


- Boil two cups of water and add an optional combination of cut unsprayed citruses (lemon, lime, orange, grapefruit).
- Let them boil in water for approximately one minute and then cook the mixture for one hour on medium heat.
- When the mixture cools down, pour it through the sieve and then pour the liquid into a spray bottle.
- Spray the mixture onto the skin before you go in the nature.





WEEK 6 OF THE SUMMER BREAK



Monday

FOREST GAMES WITHOUT FRONTIERS


Today, I went to visit Simon. He said he already misses school a little. But we're only in the middle of August! I feel the exact opposite way. I am terrified that there are only about two weeks of the summer break left and then we'll be stuck back in school again. If I only think about school I feel dread. Grandma is telling me to just enjoy the break while it lasts and not to think about the fall too much. She also told me what this is called in Latin. I'll just write it down - I'll try and charm my English teacher in the fall.

CARPE DIEM = SEIZE THE DAY





But Simon is completely different. He enjoys being in school. He says he likes to learn and that he has awesome classmates and teachers. I don't even know if that's possible. Well, it's also true that his school is located next to a city park and he can watch the trees through the windows. I only see cars in the parking lot from our classroom. That's so not cool!

Simon recommended that we should organize some kind of forest olympics or forest games, where we could compete in different fun games.

I think it's a great idea! But also a lot of work!



LIST - TO DO THINGS:

- THINK OF GAMES (me)
 - POSTER (Simon, on computer)
 - PERSONALLY INVITE LITTLE BEECHNUT, LITTLE ACORN, CHER AND RY, FIR AND PINE AND SPEEDY THE SQUIRREL (me)
 - MAKE MEDALS (grandma and me)
 - FEAST (SIMON'S MOM, Simon, me and grandma)
- 
- 
- 
- 

wednesday, THE BEST

The games are over. THEY WERE SUPER FUN! Simon came with his dad and mom. Oh, and the baby in the belly. Everyone from the apartment building at oak Street was there, except for Mr woodpecker, who apparently had a headache due to the draught in the tree hollow. Hehe, it seems that not even the red beret helps him. Fir invited her many relatives from Spruce Grove. There were also a bunch of little cones, but they didn't want to compete, just cheer. They were, however, incredibly biased and yelled the loudest when Pine and Fir were competing.

At first it was time for long jump. Little Beechnut drove down the apartment building fence with his skateboard, flew across the air and landed in the middle of fern, far away from the apartment building. Little Acorn and Pine started protesting that this is cheating, but we managed to calm them down. This way, Little Beechnut received the medal for the longest jump.



Then it was time for climbing. There was naturally no competition for Speedy the squirrel, who climbed to the top of the highest beech tree in the forest in the wink of an eye. Fir was brilliantly rolling downhill. Cher and Ry walked on two parallel ropes we installed high above the ground like true rope walkers.

Little Beechnut masterfully rode down the rapids in a little boat made from bark, while Pine broke a record in pine needle throwing. In the evening they all received medals and were incredibly happy.

This is what school should be like too. It is necessary to learn new things, even if you are not very good at them. But it is awesome to from time to time just shine in things you are really skilled at. Pine, for example, cannot even climb to the lowest branch, but he is brilliant in the javelin. Speedy the squirrel is an excellent climber, but she is scared to death of water, so you can't get her to enter a boat. And I, for example, have a very hard time at memorizing poems. But I am unbeatable at slingshot shooting.



Friday, THE TREE OLYMPICS

Me and grandma woke up very early today and went picking blueberries. On our way we met the gang from Oak Street and invited everyone to pancakes. Little Beechnut and Little Acorn helped prepare the batter, me and Fir baked them and Pine, Cher and Ry set the table. Grandma praised us all for helping.

I wrote down the recipe, so I can make them at home too. I intend to pick blueberries and put them in the freezer.

BLUEBERRY PANCAKES:

2 eggs

250g of spelt flour

1/2 of packet of baking powder (or sodium bicarbonate)

3dl of milk

50g of cottage cheese

pinch of salt

200g of blueberries (or raspberries)

1 packet of vanilla sugar

3 table spoons of sugar (or to taste)

some oil for baking pancakes



After breakfast we all showed off our medals. We joked a little bit because they are not golden, silver or bronze, but wooden. And in the end grandma said that all trees are actually winners. That every single one of them is best at something. Little Beechnut immediately started teasing Little Acorn that beech is better than oak.

Grandma said that the beech tree really would get a medal for wrestling and high jump. In the moderate climate zone, where the summers are long and the winters mild, beech is simply UNBEATABLE. It grows the fastest and pushes through the crowns of other trees stealing almost all their light. Oak would definitely win in an endurance marathon. If it grows alone and doesn't have to compete with combative beeches, it can live for more than FIVE HUNDRED YEARS!

Spruce would receive a medal for winter sports, because it can survive even in the mountains near the tree line, where there are only a few weeks of sufficient warmth for forming sugar and wood. Alder is a water sports specialist, because it thrives even on disfavored wet ground, where the roots of other trees rot.

And then grandma said something really smart: it DOESN'T matter what tree is best at what; what matters is that they are the strongest when they are together. THE MORE DIFFERENT TREES GROW AT THE FOREST, THE HEALTHIER IT IS.



WEEK 7
OF THE SUMMER BREAK

Sunday,

ALMOST THE END OF THE BREAK 😞

Oh no, the summer break is coming to an end. Six weeks went by like a flash. Soon, mom and dad are picking me up. They say I have to spend the last week of the break at home to get ready for school. I have no idea how one can get ready for school. Maybe by whining for a week. I hate shopping for books. And new clothes and shoes too. Me and Simon have found an information on the internet that clothes can also be made from trees. But they're not wooden, hehe, since it would be impossible to move if they were. Fibers for the production of clothes are extracted from wood with help of advanced technology. Now those are the kind of clothes I would love to wear too.

I will miss grandma Franja like crazy! Mom and dad are OK, but they are always working and they love the city. I like forest the best. And me and grandma are never in a hurry, we cook herbal teas together, make blueberry pancakes and chat all the time. Plus, I have a bunch of BFFs here. OK, Simon also visits me at the city sometimes.

Tonight, we are having a secret meeting in our tent. We want to organize a cool celebration for grandma's birthday. She will be 70 years old! My god, this seems like an eternity. But I hope she lives for a long time to come.

Monday, SURPRISE

There are only two days until my grandma's birthday! We are almost finished with the preparations, though. Little Beechnut, Little Acorn, Pine and Fir made a beautiful banner that says: COOL GRANDMA FRANJA, HAPPY 70TH BIRTHDAY! It's really totally cool! The letters are written in grandma's favorite colors - green and orange. She says she loves spring leaves and fall leaves equally, as well as the beginnings and endings.

Mr and Mrs Woodpecker and Cher and Ry made an incredible present: a house for beetles. Grandma loves beetles: stag beetles, dung beetles, as well as Rosalia longicorns, beech longhorn beetles and great capricorn beetles. Not too far away from our cabin there is an old knocked down trunk with a bunch of bugs. I often go there alone to watch them through the magnifying glass.

We will put the beetle house that grandma is going to get for her birthday to the front door or maybe even to the window, so we can watch them constantly. Grandma likes to joke it's better than any television.



And this is the stag beetle, which only lives for a few weeks as an adult animal, while it spends most of its life - up to eight years - as a larva.



STAG BEETLE



HOUSE

This awesome house was made by Mr and Mrs Woodpecker and Cher and Ry.



This is my favorite beetle, called the Rosalia longicorn, which is already protected in some areas, because there are only a few of them left.



ROSALIA LONGICORN

wednesday

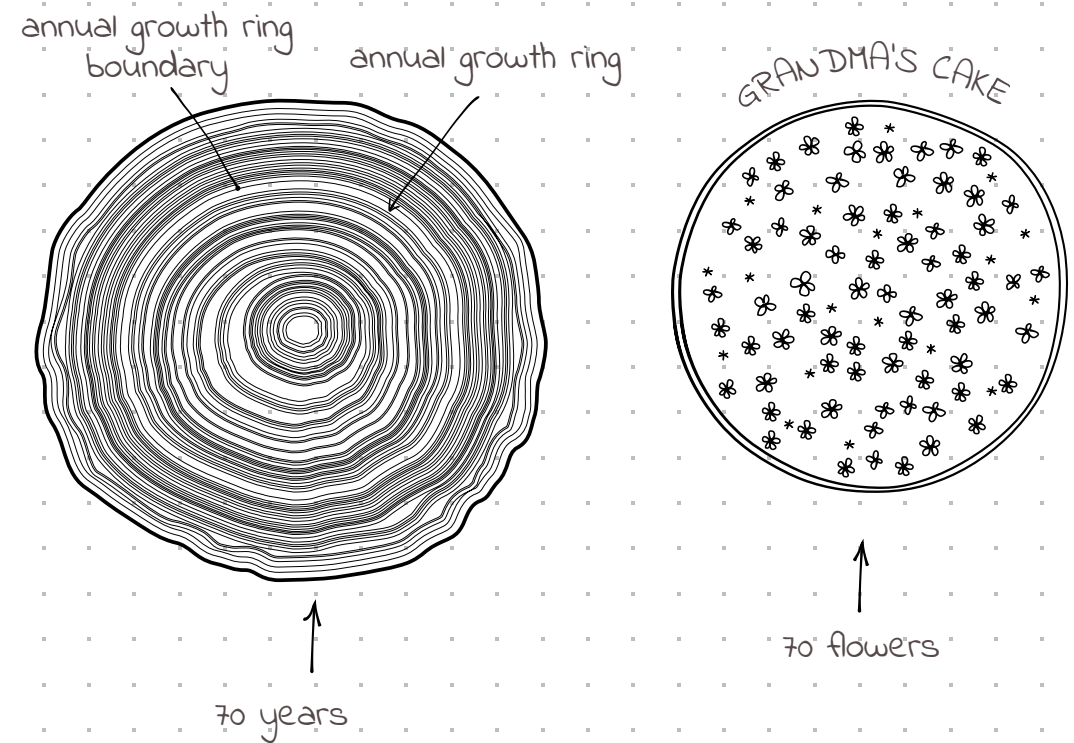
HOW OLD ARE YOU?

Phew, I'm so tired, but pleasantly tired. The party was a total success! We had guests from Oak Street, as well as grandma's friend Mara, dad and mom and Tinkara. Simon came alone, because his dad and mom went to the maternity hospital. Grandma baked an unbelievably tasty cake and sprinkled seventy colorful flower blossoms on it, one for each year.

We set the table in front of the cabin very nicely: we put chairs made of sawn trunks around the wooden table. And then the chairs suddenly reminded me of grandma's cake! They weren't sprinkled with flower blossoms or have candles, but I could still count how old the tree was, when it fell or when it was cut down. Our tree was 120 years old! Well, this is not really that much for a tree.

Dad taught me how to count tree years, when I was still very little. But back then I could only count to ten, so I couldn't count all the annual growth rings.

This is how you count TREE YEARS:



ANNUAL RINGS represent the annual growth of the wood
ANNUAL RING BOUNDARY is the boundary between two annual rings.

If the annual rings are wide, this means that the tree has thickened quite a lot in one year, and if they are narrow, the annual growth was small. When mommy saw me today, she exclaimed loudly that I have grown like crazy too. It seems my annual growth this year was big. 😊
Grandma however joked that she has shrunk.

Saturday,
GOODBYE

Dad, mom and little sister stayed with us at the forest for three days and now we are all returning home together. I think I am going to cry. But I'll be back to visit grandma again soon. I will, however, see Simon tomorrow already, because mom and I are going to visit his family to see his little sister. Her name is Cherry and she was born exactly on grandma's birthday. Simon has recommended the name. Cher and Ry were very happy that the baby was named after them.

This time I was especially sad, because I have seen my fruits - Little Beechnut, Little Acorn, Cher and Ry and Pine and Fir - for the last time. They have decided it's time to grow into trees. They found a nice clearing in the forest, where Speedy the squirrel will kindly put them in the ground. Grandma gave me a hug and told me that this way they will slowly grow from kids to young little trees and then after many years into mighty big trees. She gently added I have changed from a little girl into a young lady this summer too.

This is my last note.

MY FOREST DIARY IS FULL!

In a week I will be writing in school books again. OK, I admit I am just a tiny bit excited about it.



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