树木有智慧吗? Are trees intelligent?

Hello. This is 6 Minute English from BBC Learning English. I'm Neil.

大家好。这里是 BBC 学习英语栏目的六分钟英语。我是内尔。

And I'm Georgina.

我是乔治娜。

How did you spend your free time during the weeks of lockdown, Georgina? 你封锁的那几天是怎么度过你的空余时间的,乔治娜?

Repainting your living room?

把客厅重新粉刷?

Or doing exercise classes in the kitchen?

还是在厨房里面上锻炼课?

Actually, Neil, I've been doing some online research into my family history. 事实上,内尔,我一直在网上研究我的家族历史。

I'm investigating my family tree-you know, a drawing showing all the relationships between the different members of my family.

我在调查我的族谱——你知道的,展示了我家里各个成员之间所有关系的图表。

Ah, how interesting!

啊, 真有趣!

And how appropriate-because trees are the subject of this programme-not family trees but real, living-in-the-forest trees.

真是太合适了——因为树就是本期节目的主题——不过不过家族树,而是真的树,在森林里的 树

Well, Neil, this might surprise you, but according to some people, trees also have families.

嗯,内尔,这可能会让你吃惊,但是根据某些人的说法,树也有家人。

There are mother trees who support and help feed child trees.

存在支持和帮助喂养孩子树的母亲树。

That's right.

没错。

According to Suzanne Simard, one of the world's leading tree researchers, trees should be seen as intelligent.

根据世界顶级树木研究者之一的 Suzanne Simard 的说法,树木应该被看做是有智能的。

They communicate with each other.

它们互相沟通。

They help each other.

它们互相帮助。

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And as you mentioned, Georgina, they can even tell their family members.

正如你之前提到的那样,乔治娜,它们甚至能辨别它们的家庭成员。

So a tree can have its own family tree-amazing!

所以树也拥有自己的家族树——太棒了!

Tell me more.

再告诉我更多信息。

OK, Georgina, but first let me ask you my quiz question.

好的, 乔治娜, 但是首先我要问你一个问题。

The largest trees in a wood or forest are called 'mother trees'.

树林或森林里的最大的树被叫做"母亲树"。

As they're the biggest, mother trees usually have the longest, most connected roots.

因为它们是最大的树,所以母亲树的根通常最长,也有最多的联结。

So my question is this-what is the world's largest currently living tree? 所以我的问题如下——世界上现存的最大的树是什么?

Is it a) a baobab tree, b) a giant redwood tree, or, c) a sequoia tree? 是 A. 一棵猴面包树, B.一棵巨大的红木, 还是 C. 一棵红杉树?

Hmmm... I've seen photos of redwood trees in California and they're huge, so I'll say b) a giant redwood.

嗯……我见过加州红木的照片,它们巨大无比,所以我要选 B. 一棵巨大的红木。

OK, Georgina, I'm sure you only chose that 'cause it's the easiest one to pronounce but we'll find out the answer at the end of the programme.

好的,乔治娜,我想你选这个答案的原因只是因为它是最好读的那个,但是我们稍后会揭晓答案。

Now let's get back to that tree researcher, Suzanne Simard.

现在我们说回那个树木研究者 Suzanne Simard。

Her big idea was the 'wood wide web'-a way of describing the network of underground roots linking trees to other trees of the same family.

她的宏图是建立"树维网"——一种描述将树木与其同族树木连接起来的地下树根网络的方式。

Here's Suzanne explaining more about tree families to BBC World Service programme, The Big Idea.

以下是 Suzanne 在 BBC 世界服务节目《The Big Idea》中进一步解释树木家族。

We found that the parent trees would favour those seedlings that were of their own kin versus the strangers.

我们发现亲代树相比于陌生树的幼苗会偏爱它们自己亲戚的幼苗。

That's extraordinary-and when you say they favour their own family members, you mean they'll send more nutrients to their offspring than they would to, as it were, a stranger tree?

这真是太神奇了——当你说它们偏爱自己的家族成员时,你是指相比于一棵陌生的树,它们会给它们的后代输送更多的营养吗?

That's right.

没错。

Mother trees send food and nutrients to their own seedlings-young plants that have been grown from a seed.

母亲树会给它们自己的幼苗——从种子发育而来的幼小的植株——输送食物和养分。

In this way, parent trees help their offspring-another word for their children, or young.

这样亲代树就可以帮助它们的后代——表示孩子或幼苗的另一种说法。

Mother trees can recognise and feed other trees of their own kin-an old fashioned word meaning family.

母亲树可以辨别并喂养它们自己的亲故——家人的旧称——的树。

With the extra nutrients and carbon they receive, the offspring can extend their own root network and suck up even more nutrients...

有了这些额外的营养和碳,后代可以延伸它们的树根网络并吸取更多的营养......

...which in turn increases their own growth, turning some of them into the giants we see growing in California and other parts of the world.

……这反过来会促进它们自身的生长,让它们成为我们今天在加州和世界其他地方看到的巨大的树。

Amazing! With trees behaving in clever ways like this it's no wonder Suzanne thinks they have intelligence.

太棒了! 这些树这么聪明, 难怪 Suzanne 认为它们有智慧。

And that's not all.

这还不是全部。

Listen again as Suzanne discusses the question of whether trees are 'alive' with BBC World Service's, The Big Idea.

再听听 Suzanne 在 BBC 世界服务节目《The Big Idea》中讨论树是否是"活的"的问题。

See if you can hear her opinion.

看看你能否听到她的观点。

Alive in the sense of having agency in their destinies, instead of being you know...

活的指的是有力量支配它们的命运这层意思,而不是说......

I think a lot of people think of trees as just sort of like these sticks that grow out of the ground, they're kind of these inert things that don't have agency in their destiny, that they don't change behaviours and make decisions but what we're finding is that they do all that.

我想很多人都把树当成那种土地里冒出来的枝干,它们不活动,没有力量支配它们的命运,它们不会改变行为,也不会做决定,但是我们发现这些事情它们都会做。

And, you know what, step back and think trees have evolved over a long long long time, way longer than human beings and they have evolved in communities and they have to grow and survive.

而且你知道吗,退一步想,树木进化了很长很长时间,比人类进化的时间要长得多,而且它们以社群为单位进化,它们要生长和生存。

I think Suzanne believes trees are alive and intelligent, because she says they have agency-a concept meaning having the ability to act and effect your environment.

我想 Suzanne 认为树木是活着的且有智能的,因为她说它们有力量——这个概念表示有能力行动并影响你的环境。

Dying trees even seem to know the future-before they die, they warn their offspring to start making new root connections.

濒死的树甚至似乎知道未来——在它们死亡之前,它们会警告它们的后代开始创造新的根系连接。

Showing that trees have some understanding of their destiny-everything that happens in someone's life and what will happen in the future.

这表示树木对它们的命运——人的一生中发生的一切以及未来会发生的事情——有一定的理解。

So it seems that trees are much more intelligent than we thought, Georgina. 所以树木似乎比我们想象的要有智能得多。

It's certainly going to change how I feel about going for a walk in the woods, surrounded by all those intelligent trees chatting to each other.

这一定会改变我们以后在树林里散步的感觉,被一群有智能的会互相聊天的树木环绕着。

I wonder if they have family arguments.

我想知道它们会不会进行家人之间的争论。

Ha. Well, I would not argue with one of those really gigantic trees, such as...well, Georgina, you tell me.

哈。我肯定不会跟其中一棵巨大的树争论,例如.....乔治娜, 你来告诉我。

Ah, you mean your quiz question-about the largest living tree?

啊, 你指的是你的问题——关于世界上活着的最大的树?

Exactly. What did you say?

没错。你说的是?

I said the largest currently living tree was, b) a giant redwood.

我说世界上目前活着的最大的树是 B. 一棵巨大的红木。

Was I correct, Neil?

我答对了吗,内尔?

Well, you got the 'giant' part right, Georgina, but in fact the answer was c) a giant sequoia named General Sherman.

嗯,你就"巨大的"说对了,乔治娜,但事实上正确答案是 C. 一棵叫做谢尔曼将军的巨大的红杉树。

He lives in California's Giant Forest, he's a whopping 83 metres tall and measures a massive 33 metres around the trunk!

它生长在加州的巨树林里, 高达83米, 树干周长有惊人的33米!

Wow! And I bet he has a huge family tree!

哇! 我想它肯定有很大的族谱!

Ha-ha. Right then, Georgina, let's recap the vocabulary we've used discussing intelligent trees, starting with family tree-a diagram showing the relationships between family members.

哈哈。好了,乔治娜,我们来回顾我们用来讨论有智能的树的词汇吧,从族谱——展示了家族成员之间关系的图表——开始。

Trees are intelligent enough to communicate with their children, or offspring.

树木有智慧, 能够跟它们的孩子, 或者说后代沟通。

These young plants which have grown from seeds are also known as seedlings.

这些由种子发育而来的年幼的树苗也被叫做幼苗。

Another word we learned is kin-an old-fashioned way of saying family. 我们学到的另一个词是亲故——家人的旧称。

According to tree expert Suzanne Simard, trees have agency-a term describing the ability to act and influence your surroundings.

根据树木专家 Suzanne Simard,树木有力量——描述行为能力以及影响环境的能力的术语。

And the fact that trees make all kinds of decisions about their lives suggests they understand their destiny-everything that happens to someone during their life, including in the future.

而树木做出各种关乎它们生命的决定的事实也表明它们理解它们的命运——某个人一生中发生的一切,包括未来。

Thank you for joining our walk through the woods of English vocabulary. 感谢你跟我们一起在英语词汇的森林里漫步。

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Bye!

再见!