Be a Nature Explorer!



From the bestselling author of *The Hidden Life of Trees*

PETER WOHLLEBEN

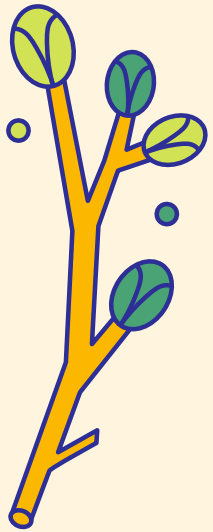
Translated by **Jane Billinghurst**

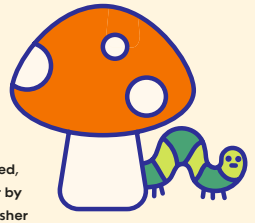
Illustrated by **Belle Wuthrich**

DAVID SUZUKI INSTITUTE

GREYSTONE KIDS

GREYSTONE BOOKS • VANCOUVER/BERKELEY/LONDON





Text copyright © 2022 by Peter Wohlleben
Illustrations copyright © 2024 by Belle Wuthrich
English translation copyright © 2024 by Jane Billinghurst

24 25 26 27 28 5 4 3 2 1

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, without the prior written consent of the publisher or a license from The Canadian Copyright Licensing Agency (Access Copyright). For a copyright license, visit accesscopyright.ca or call toll free to 1-800-893-5777.

Greystone Kids / Greystone Books Ltd.
greystonebooks.com

David Suzuki Institute
davidsuzukiinstitute.org

Cataloguing data available from Library and Archives Canada
ISBN 978-1-77164-969-8 (pbk.)
ISBN 978-1-77164-970-4 (epub)

Editing by Jane Billinghurst
Copy editing by Jill Bryant
Proofreading by Alison Strobel
Cover and interior design by Belle Wuthrich

Printed and bound in China on FSC® certified paper at Shenzhen Reliance Printing. The FSC® label means that materials used for the product have been responsibly sourced.

Greystone Books thanks the Canada Council for the Arts, the British Columbia Arts Council, the Province of British Columbia through the Book Publishing Tax Credit, and the Government of Canada for supporting our publishing activities.

Canada

British Columbia | British Columbia Arts Council

Canada Council for the Arts | Conseil des arts du Canada

FSC www.fsc.org MIX Paper from responsible sources FSC® C102842

Greystone Books gratefully acknowledges the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish), and səl̓ilwətaɬ (Tsleil-Waututh) peoples on whose land our Vancouver head office is located.

While this book may mention specific plants, insects, and so forth, the author and publisher recommend that readers not touch or consume anything unless they are certain it is safe to do so. Kids, always check with an adult before touching or consuming anything you are unfamiliar with. Parents and guardians, please consult with and follow your local park and outdoor regulations, warnings, and restrictions.

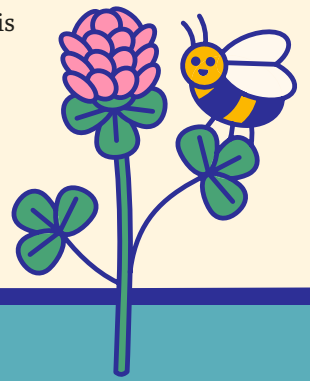
I'm So Happy You're Here!

When I was young, I loved to be out in nature and I enjoyed many adventures. For more than thirty years now, I've lived in an old forester's lodge in the Eifel mountains in the far west of Germany. I've seen wonderful animals here and discovered many amazing things about the natural world. Would you, too, like to go out and explore? You can absolutely do that because now you have this guide!

Lots of the animals and plants described in this book might also live near you, and most of the experiments will work all over the world. Your adventures will be even more exciting if you discover plants or animals that I'm not aware of because they don't exist in Germany. Some may look like the ones that live near me, but they've adapted to live near your home. Record these animals and plants in your very own nature notebook. Then you will have two books—the one I wrote and the one filled with your own discoveries.

To get started, all you have to do is step outside and set out on your first adventure. Have fun!

-Peter



Contents

What to Take With You 2

A Few Tips Before You Set Off... 4

1. Checking What's on the Menu.. 6
2. Listening to Tree Talk..... 8
3. Discovering Pond Life..... 10
4. Using a Forest Telephone 14
5. Sampling Algae 15
6. Calculating the Age of Trees 16
7. Spotting Birds..... 17
8. Following Slugs and Snails..... 18
9. Making a Tree Friend 20
10. Finding Signs of Spring..... 24
11. Snacking on Sweet Blossoms ... 26
12. Looking for Tire Tracks..... 27
13. Learning About Night Animals.. 28
14. Peeking Underwater..... 30
15. Making Chewing Gum..... 31
16. Counting Tree Rings..... 32
17. Mapping Plants That Move..... 34
18. Tracking Animals 35
19. Deciphering Clues..... 38
20. Locating the Forest Internet..... 42
21. Welcoming Summer..... 43
22. Clueing In to History..... 44
23. Drumming for Earthworms 46
24. Knowing When to Water..... 47
25. Predicting Rain..... 48
26. Identifying Deciduous Trees 50
27. Telling Conifers Apart 52
28. Saying Hello to Spiders 54
29. Skipping Stones 56
30. Roasting Beechnuts 57
31. Collecting Bark Rubbings 58
32. Pressing Leaves..... 60
33. Recognizing Animal Bones 62
34. Collecting Cones 63
35. Building a Sailboat 64
36. Surprising Your Friends..... 66
37. Blowing Bubbles..... 67
38. Decoding Decomposition 68
39. Finding Things That Flutter..... 70
40. Scoping Out Stars 72
41. Playing With Tickly Grasses and Sticky Burs 73
42. Sifting Through the Forest Floor..... 74
43. Calling All Ants!..... 76
44. Attending to Business..... 77
45. Scattering Seeds..... 78
46. Unpacking Buds 79
47. Tracking Down Beetles and Bugs 80
48. Whistling With Grass..... 81
49. Sorting Seeds 82
50. Eating Colorful Food..... 84
51. Focusing on Leaves 88
52. Acting Smart in Stormy Weather..... 90

Acknowledgments 92

Photo Credits..... 92

About the Author and Illustrator 93

activity 2

Listening to Tree Talk

Trees talk to one another.
And you can smell their conversations!

When a bark beetle lands on a tree to bore into its bark, the tree can feel it. The tree tries to get rid of the beetle by pushing a drop of sticky resin out of the hole the beetle is making. The beetle gets trapped and can't get any farther inside the tree.

Because trees react so slowly, they can defend themselves better if they have time to prepare themselves for the beetles' attack. For example, trees can prepare themselves when they are warned by other trees. Trees alert other trees to danger using scent. Every fragrance means something different. Trees share a language based on scent! You can smell it too, especially on hot summer days. If you sniff the air under conifers, you smell a sweet, spicy aroma—the alarm calls of trees.

Trees' needles spread the scent. Pick a few needles and rub them between your fingers. Notice how the smell becomes stronger? Pick needles only from trees that are not poisonous, such as spruce, pine, fir, or Douglas fir.

The most poisonous conifers in the forest are yew trees. Their dark green needles, bark, and the bright red packaging around their seeds are all dangerous.



In spring, you can even use needles from spruce or Douglas fir trees to make a smoothie. Fill a blender with fruit, some greens like spinach or lettuce, a few fresh needles, and a bit of water. Blend well. And there you have it—your tree smoothie!

activity 4

Using a Forest Telephone

Woodpeckers use a kind of tree telephone.

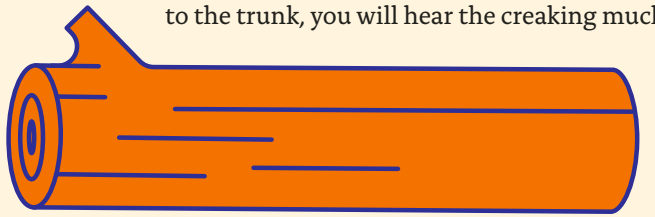


Woodpeckers nest in cavities in tree trunks. Because wood transmits sound well, birds can hear when an animal climbs their tree. Then they look out to see who's coming.

You can discover for yourself what an approaching predator sounds like to the woodpeckers. First find a friend to help. Then look for a long trunk lying by the side of the trail. One of you holds an ear close to the thinner end of the trunk, while the other scratches or taps quietly with a little rock on the wider end. Without the trunk between you, the listener would not hear anything. But thanks to the tree telephone, the listener can tell whether the other person is scratching or tapping.

Windy weather is another good time to hear how well sound travels through a tree trunk. Find a tree that creaks a little when its top sways in the wind. If you hold your ear to the trunk, you will hear the creaking much more clearly.

If the wind builds to a storm, you should stay home because sometimes branches break off in stormy weather.



activity 5

Sampling Algae

You find a green, gray, or orange coating on the exterior walls of many houses. This is often caused by tiny plants called algae—and you can collect these plants.

Algae love moist air and avoid direct sun. That's why you seldom find them on the south side of houses. They grow best on shaded walls that get wet when it rains.

Have you found some? Now all you need is plastic wrap and your notebook. Take a strip of plastic wrap and press it over the algae. When you pull the plastic wrap off, algae will be stuck to the side that was against the wall. Now tape the plastic wrap onto a page in your notebook where you are collecting your discoveries. Underneath, write when and where you found the algae. Can you find algae in a variety of colors?

When it rains, lots of water runs down the trunks of deciduous trees with smooth bark. Algae really enjoy these conditions. You'll sometimes find reddish algae growing there in addition to the usual layer of green.

activity 14



Peeking Underwater

You don't need goggles or a diver's mask to see into a stream or under the smooth surface of a lake.

All you need is a glass bowl, a plastic container, or a large glass. They all work almost as well.

Immerse the container in the water as far as you can without water spilling over the edge. It's best to hold on to the container with both hands.

To make sure you don't tip too far forward and end up in the water, have someone hold on to you from behind. This works especially well if you have a belt or a sturdy waistband. The second person can hold on and gently pull back.

Now look through the bottom and sides of your container. What can you see?

It's important that your container is completely transparent and the bottom is flat without any patterns or writing on it.

activity 15

Making Chewing Gum

When spruce trees are injured, a sticky liquid flows out of the wound. The tree uses this like glue to quickly close the wound. Over time, the liquid dries out.

You can make chewing gum from dried-out spruce resin. In the forest, look for resin on the bark of large spruce trees. A good drop of resin is transparent and quite large (almost 0.5 inches; about 1 centimeter across). When you touch it, it should feel hard.

Pick this hardened drop of resin off the bark and put it in your mouth. At first, do nothing. After a couple of minutes, test it carefully with your teeth to see if it's slowly getting soft enough to chew. But don't start chewing too soon! If you do, the drop will shatter into tiny, bitter pieces.

As you test and chew, spit often. You're allowed to do that in the forest! The resin will gradually lose its bitter taste. If all goes well, after about ten minutes you'll have a pinkish chewing gum. When you don't want to chew it anymore, don't swallow it. Just spit it out!

Only use resin from spruce trees and don't look for resin in parks. Parks often grow species that are not local to your area, and their resin might be poisonous.