



The world's first ecological picture book inspired by the United Nations Sustainable Development Goals (SDGs) to focus on soil, this book turns scientific facts into a delightful story. Written by a soil scientist and brought to life with illustrations by a celebrated artist, this book is sure to charm parents and kids—even those who usually steer clear of centipedes!

An educational and fun introduction to biodiversity, this book makes accessible concepts such as "soil management," "soil properties," and "soil animals." SDGs are a set of 17 global goals established by the UN to address pressing challenges, among them poverty, inequality, climate change, and environmental conservation.



Author **Chiao-Ping Wang**

Chiao-Ping Wang holds a Bachelor's and Master's degree in Forestry from National Chung Hsing University and a Ph.D. in Forest Soil Science from the University of Goettingen in Germany. She is currently an associate Researcher at the Silviculture Division of the Forestry Research Institute under the Ministry of Agriculture and an adjunct associated professor at the Institute of Life Sciences, National Defense Medical Center, where she primarily teaches ecology. Her expertise includes forest soils and silviculture, restoration of degraded ecosystems, global change, soil ecology, and urban ecology. Wang has received the Executive Yuan's Outstanding Research Award and is dedicated to promoting ecological urban development and rural soil conservation through popular science education supported by National Science and Technology Council for years.



Illustrator **Leo Tang**

Leo Tang, whose real name is Shou-Nan Tang, is best known for the *Short-Eared Bunny* picture book series, a beloved collection that has captivated readers of all ages and achieved widespread acclaim. The series has been translated and sold in Japan, South Korea, Thailand, Turkey, and other countries. Tang's work has been selected for the Catalonia Illustration Biennial, received the Golden Butterfly Illustration Award of Honor, and been recognized at the Asian Picture Book Original Art Biennial. The artist has also been repeatedly featured as a recommended illustrator at the Taiwan Pavilion of the Bologna Children's Book Fair in Italy. In addition to illustrating, Tang is active in the field of artistic creation, with works widely collected by private individuals and art museums.

Centi's Adventure

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The Soil Beneath Our Feet Has a Profound Impact on the Future of Humanity: A Note from the Author

by Chiao-Ping Wang

In 2013, the United Nations Food and Agriculture Organization (FAO) launched the Global Soil Partnership, urging soil scientists to help the public understand the seriousness of global soil degradation. Food security, agricultural stability, and climate change are all intricately linked to soil. This initiative marked the beginning of my journey of popular science education on soil ecology.

I see myself as someone who lives off the soil, and through my experiences, I've met many farmers who depend on the land for their livelihoods. These farmers are all very environmentally conscious and eager to contribute to ecological conservation. However, many of them

do not realize that the soil beneath their feet is the most critical aspect in need of protection and restoration. It is also the foundation for terrestrial ecosystem conservation.

Soil needs understanding and care, yet its ecosystem functions and services are too complex to grasp at a glance. It's an invisible world, home to creatures that are not only largely unknown but often misunderstood. For example, the soil contains numerous mites, springtails, and nematodes, whose relationships with soil microorganisms are extremely complex and also connected to plant health and diseases. Yet for decades, humans have viewed these creatures as pests that need

to be eradicated, leading to a significant loss of soil biodiversity.

So, how can I help the public understand that soil is an ecosystem? How can I explain that the health of the soil ecosystem directly impacts the future of humanity?

The story of the Lion King popped into my head. As biodiversity conservation becomes a global priority, the traditional bottom-up view of ecology—starting with green plants—has been challenged. Ecological disasters have shown that losing top predators in an ecosystem causes herbivore populations to spiral out of control, leading to the overconsumption of plants. This imbalance can disrupt or even collapse the entire ecosystem. There are countless examples that demonstrate the importance of top predators in maintaining ecological balance and the sustainability ecosystems.

The centipede is one of the top predators in the soil. However, while

humans admire and protect large predators such as lions, tigers, and eagles, most people associate centipedes with toxicity, fear, disgust. I chose the name "Centi"—derived from the Latin roots *centi*, meaning "one hundred," and *pede*, meaning "foot"—for the character to subtly convey knowledge about soil and human practices for soil management. Through Centi's journey to find a home, the story conveys the idea that soil, humans, and organisms are interconnected components in terrestrial ecosystem.

I hope readers, by falling in love with the little centipede, will also grow to cherish and protect the precious soil ecosystem.

The author's afterword has been edited for the purposes of this booklet.



One day, a centipede named Centi was chasing a grub.



Suddenly, there was a tremendous racket from above!
Frightened, Centi dug down as deep as he could go!

It was a farmer digging up the soil and grasses. Not even the roots were left.

Without the grasses, there was no shelter — not even for the pillbugs or the millipedes.

The buzzing bees were gone too.

Only the hardy ants were left. The world became quiet.



The soil loosened and capillaries disappeared.

With no shade from any plants, the water evaporated from the soil until it became dry and cracked.

Centi's home was gone.

There was nothing left in the hot, dry soil.

Centi was frightened and cried, but he knew he had to find a new home.



An old wax apple tree outside the old house. The ripe fallen fruits attracted fruit flies, butterflies, and beetles, which were all good food for Centi.

The wax apple tree kindly said to the crying Centi, "Don't cry, child. There should be good soil just over that low wall."



Eat and fill
your belly before
you set off.

