

The Bee Tree

written by Stephen Buchmann and Diana Cohn
illustrated by Paul Mirocha

About the Book

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Resources on the web:

leeandlow.com/books/the-bee-tree

SYNOPSIS

Nizam lives in a village in Peninsular Malaysia. His grandfather Pak Teh is the leader of the honey hunting clan. It is Pak Teh who has the high honor of climbing the tall Tualang tree deep in the rainforest. Lying on a branch more than a hundred feet in the air, he uses the clan's secret method to harvest the honey without being stung. But Pak Teh is getting older, and he is ready for someone to take his role. He believes that Nizam and his cousin Shukor should be the ones. Even though Nizam has climbed the mighty Tualang in the day-light, he has never done it at night. Will he be brave enough? Will the angry bees sting him? Or will he succeed and claim his place in the clan?

All guided reading level placements may vary and are subject to revision. Teachers may adjust the assigned levels in accordance with their own evaluations.

BACKGROUND

Author's Note from Stephen Buchmann, Diana Cohn, and Paul Miroch

"We, the creators of *The Bee Tree*, can attest to the truth of this lovely Malaysian proverb, adding from our own experience, though, that you can't really know another culture until someone from that culture invites you in. For we never would have come to love Malaysia without the many fine friends who introduced us to their world, including the honey hunters who gave us our first experience of the magical honey hunt. They were our hosts as we entered the dense rainforest and witnessed the ancient honey hunting ceremonies on a dark moonless night, an awesome experience unlike anything we had ever had before. This was a precious gift. We offer this book in gratitude to the world's honeyhunters of the past, present and future. And we present it to you in hopes that you will come to love Malaysia as we do. Now, let us tell you more."

Additional Information from the Backmatter of *The Bee Tree*

Malaysia and Its Peoples

Malaysia is a country in Southeast Asia. To get there from the U.S., we had to fly over the Pacific Ocean. Our flight from Los Angeles, California to the capital of Malaysia, Kuala Lumpur, took almost twenty hours. Malaysia is an unusual country because it is composed of two distinct parts separated by the South China Sea. West Malaysia is a peninsula connected on its north with Thailand. East Malaysia sits on the north of the giant forested island of Kalimantan (Borneo), which it shares with Indonesia. The peninsula and the island share a largely similar landscape and environment—hillsides and waterways clothed in deep green rainforest trees. Tak kenal, tak cinta: You can't love what you don't know —A Malaysian proverb

Malaysia is a country with over twenty-four million people from many different cultures. Indigenous people, Indians, Malays, and the Chinese are all Malaysian citizens. Our friends Pak Teh and Nizam are Malays. They live in West Malaysia. The two million indigenous people, called "Orang Asli"—which means "forest people"—live primarily in East Malaysia. Many of the Orang Asli are also traditional honey hunters just like those in *The Bee Tree*. Most Malaysians speak Bahasa Melayu, the country's official language. Their language is similar to that spoken on the hundreds (maybe thousands) of islands which make up the nation of Indonesia.

With so many different kinds of people, Malaysia has an exciting and vibrant cultural life. Our senses were delighted as we walked through the streets and open-air markets. Women wore beautiful silk scarves. Both men and women were wearing sarongs made from cotton or silk, and blouses and shirts with intricate patterns and bold colors. We tried all kinds of new food—tasty chicken satay on bamboo skewers, spicy hot food with different ocean fish or beef, rice flavored with cumin, lemon grass, coconut milk, and wild ginger. Islam is the official religion of the country. The golden spires of mosques rise up like flowers in the midst of cities, towns and countryside. There are beautiful Hindu and Buddhist temples too. Five times a day—at sunrise, noon, mid-afternoon, sunset, and after dark—we heard the call to prayer sounding from the mosques.

The Rainforest, the Jewels of the Earth

Our hosts led us into the rainforest along a narrow trail that wound its way uphill from the road to *The Bee Tree*. The air here was thick with moisture and afternoon heat. Since Malaysia is close to the equator, there aren't true seasons, only wet and less wet times of the year.

We felt as if we were entering a giant cathedral—the tree trunks were like thick brown pillars holding up a leafy green roof that blocked out the sun. Looking down along the trail, we saw splotches of color: yellows, whites, pinks and blues. These were the petals of countless flowers that rain down upon the forest floor from above.

Rainforests are miraculous places where an abundance of plants—trees, shrubs, herbs, vines, mosses—create a flowering cornucopia of colors and smells. Over 750 species of trees can be found in just twenty-five acres (roughly the size of twenty-five football fields) of Malaysian rainforest. That's more tree species than in all the continental United States, where there are 600 species. It's hard to imagine so many kinds of trees. Each one has a slightly different bark, leaves, and flowers. We will never encounter so many different trees as we did on the hillsides above Pedu Lake.

This exotic environment provides a wonderful habitat for an almost infinite variety of birds, mammals, reptiles, and insects. Indeed, rainforests are home to two-thirds of all the living animal and plant species on the planet. Scientists believe that they still have tens of millions of new species of plants, insects, and microorganisms to discover in these forests! The rainforest has multiple stacked layers of plants, beginning with the forest floor and stretching to the upper reaches of the tallest trees. Young forest trees strain and grow to be the first to reach the light at the top of the forest, the upper canopy. Too much shade can stunt or kill plants that remain below, so the forest floor is nearly bare. Fungi and insects quickly eat all the leaves that fall to the ground. Woody vines, called lianas, wrap around trees and make their way up into the canopy.

Insects are the most common creatures that live in the forest—butterflies with iridescent wings, dragonflies, colorful beetles, cicadas with their shrill cries, and green katydids, to name only a few. Some insects are brilliantly colored, while others—camouflaged like leaves, twigs, or thorns—play hide-and-seek amid the foliage. Though some insects are silent, we heard others all around us, though we didn't always see them.

In the Malaysian rainforests of our story, giant mammals—tigers, Asian elephants, and the Malaysian tapir—roam in the darkness of the forest floor. At dawn and dusk, we heard noisy gibbons “sing” beautiful duets together to announce their presence. Above in the trees, three-foot-long flying squirrels and gliding lizards leapt from branch to branch. Monkeys of every variety ate the leaves and fruits of the tall trees. Many will spend their entire lives in the treetops. Below them live frogs, lizards, snakes, deer, river otters, bizarre birds, and snakes including the venomous King Cobra. Now we know firsthand why the rainforests are called the “jewels of the earth.”

If you want to learn more about the rainforest plants and animals of Malaysia, please visit the website of the Malaysian Nature Society at www.mns.org.my.

Giant Honey Bees

There are more than 20,000 kinds of bees in the world. Surprisingly, most of them do not make honey! There are only about 660 kinds of bees that make honey. These include bumble bees, stingless bees, and true honey bees. Many true honey bees are domesticated, kept by beekeepers in white hive boxes, like our familiar European honey bees. Honey bees store surplus honey in their wax combs, making it easy for people to harvest. This is the honey sold in farmers' markets and on supermarket shelves.

Many wild honey bees live in the tall Asian rainforests. The giant honey bee, called *Apis dorsata*, is the world's largest honey-maker. The bees are one inch long, with colorful bands of orange, black, and brown, and have smoky dark wings. They make their nests under the wide branches of the tallest trees, especially the tualang trees. The bees make beeswax which they shape into huge two-sided combs. Their nests hang like half-moons under the protective tree branches. Each comb is six feet across and three or four feet wide! Thirty thousand or more giant honey bees live on the surface of the nest. Their hairy bodies form a living "bee blanket" several bees deep—it keeps the nests dry even during a monsoon downpour.

The most amazing thing about these Asian honey bees is their migration as a colony from place to place—following the new blooms—to harvest nectar and store it as honey. Each October or November in the forests surrounding Pedu Lake in Peninsular Malaysia, the migrating bees arrive at *The Bee Trees* and build new wax nests. Pak Teh is happy when he finds the first nests of the year up in *The Bee Tree*. Nobody knows where the migrating bees go when they leave every year, but like the salmon or the Monarch butterflies, they somehow find their way back home. The bees often return to the same branch of their special tree every year. And this is even more amazing when you consider that only the queen bee is long-lived—the other bees are not the same bees who left the branch the year before. Some bee trees have been found with more than one hundred active bee nests! The honey hunters can collect as much as one thousand pounds of delicious wild honey from a single tree.

The giant honey bees vigorously defend their nests against people and other animals. Pak Teh taught us that when you walk around the base of a bee tree, you must walk slowly and hide your movements beneath bushes and small trees. Many people who don't take these precautions are stung each year, attacked by hundreds of bees flying down from their nests. During our first honey hunt, when the sparks flew down from the torches held by the honey hunters and the bees chased them to the ground, we instinctively ducked and covered our faces with our hands—the bees created a loud roar that terrified us. The honey hunters stay safe because they climb the trees for honey only on moonless nights. In the darkness, the bees cannot find them to sting.

Honey Hunters

"Everything in the forest is given by the Creator, and it is for us to make use of, but we must preserve whatever is given by the Creator. We need to take care of the forest and if we do so, the forest will take care of us." – Pak Teh

Early peoples discovered that true honey bees store up enough honey to make it worthwhile

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to collect the honey from their wild hives. For thousands of years, mostly in hot humid tropical countries where honey bees are abundant, people have climbed trees and scaled cliffs, suffering the painful stings of angry bees protecting their nests, to get at the sweet golden honey. The delicious honey—a nutritious food which supplies energy quickly to our bodies—is their reward. The honey is also used for medicine. The honey hunters put it on burns and wound to keep them germ-free and to help them heal faster. The Orang Asli—the indigenous people of Malaysia—as well as traditional Malays have always been skilled honey hunters. The honey hunt is central to their culture and way of life. Just as in *The Bee Tree*, the honey hunters climb only on moonless nights or after the moon has set. They climb the tall tualang trees using a special wooden ladder and ropes.

We were amazed at the skill and courage required in hunting honey. One time, we bravely tried climbing up *The Bee Tree* ladder about fifteen feet so we could take each other's photo. That was enough for us. The idea of climbing the flimsy ladder another hundred plus feet was more than we could stand. The honey hunters have a deep respect for the animals and plants of the forest. They sing prayers to the bees while they harvest the honey. Using their liana torches, the honey hunters tap the branches above each nest, sending a cascade of bright orange sparks floating slowly to the ground. The bees chase the sparks and remain on the ground below until dawn, when the sun rises and the bees can again see to fly. With all the bees on the ground, the honey hunters are safe to cut the honey combs high above.

After harvesting the honey, the hunters share their bounty with their friends and neighbors from their village. They also sell this honey in local markets. The honey hunters' wild honey is the very finest and continues to be held in the highest esteem throughout Malaysia.

The Future

Because we were invited to participate in the honey hunt, we saw firsthand how Pak Teh is keeping this ancient tradition alive. When we asked him what the future is for honey bees, the Malaysian honey hunters, and the world's oldest rainforests, he answered, "As long as there is the rainforest, there will be bees, and as long as there are bees, there will be honey, and as long as there is honey, there will be honey hunters." Pak Teh has been teaching the young people in his village—like Nizam and Shukor and other young men their age—the ways of the honey hunt so that the gathering of the honey will continue.

The mighty tualang, or *The Bee Trees*, are "trees of life," their branches home to many other rainforest animals and plants. Every day, scientists discover new species of plants and animals in these forests. Many of these plants contain powerful new medicines that can help cure the peoples of the world. But even more important to the honey hunters is the fact that the *Apis dorsata*, the giant honey bee, is crucial as a pollinator of many of the rainforest trees and other plants. To imagine its importance, think of an arch made of stone. At the very top of the arch is a stone called the keystone. This stone has the least pressure on it of any of the stones in the arch, but if it is taken out, the arch will collapse.

The giant honey bee is like that keystone. In fact, it's known as a keystone species, a species on

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which the existence of a large number of other plants and animals in the rainforest depends. Without the honey bee, the ecosystem it upholds could fail. Knowing this and having had the privilege to enter the rainforest as the guests of the honey hunters, we understand the great reverence and honor they pay these fierce, buzzing creatures as they gather the rich healing honey from their nests.

Tualang Tree

The tualang tree is a majestic emergent tree of the Southeast Asia rainforests best known for the disk-shaped honeycombs which hang from its horizontal branches. Towering above the canopy the tualang can reach 250 feet, or the 30 stories in height. These trees can be found growing in the lowland forests of southern Thailand, peninsular Malaysia, northeastern Sumatra, Borneo, and Palawan. Their habitat is the primary tropical rainforest. They prefer damp locations along rivers, in valleys, and the lower slopes of hills. (<https://www.blueplanetbiomes.org/tualang.php>)

The Mosque

The English word "mosque" denotes a Muslim house of worship. The word evolved from the Arabic term *masjid*, which means "place of prostration." During prayer, Muslims briefly kneel and touch their foreheads to the ground as a sign of submission (literally, Islam) to the will of God. (<https://www.metmuseum.org/learn/educators/curriculum-resources/art-of-the-islamic-world/unit-one/the-mosque>)"

Malaysian Tualang Honey

This honey is expensive, fetching 150 ringgit (\$38) a kilo—a huge amount for people from poor, rural communities. Tualang honey is honey created by the giant honey bee, *Apis dorsata* that builds its honeycombs high in the Tualang tree.

In a way it could be said that the name 'Tualang honey' is a bit of a misnomer, because the honey comes from nectar gathered by the bees from a wide range of plants within the forest, not from the Tualang tree itself. (<https://www.buzzaboutbees.net/what-is-tualang-honey.html>)

BEFORE READING

Prereading Focus Questions

(Reading Standards, Craft & Structure, Strand 5 and Integration of Knowledge & Ideas, Strand 7)

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1 and 2)

Before introducing this book to students, you may wish to develop background knowledge and promote anticipation by posing questions such as the following:

- What do you know about bees? Where do bees live? How do they help our environment?
- What do you know about Malaysia? What is the geography like in Malaysia? What is the climate like?
- Have you ever done something that you were afraid to do? How did you overcome your fear? What strategies did you use when you felt fearful? How do you feel about doing that activity now, after addressing your fear?
- What does family mean to you? Is there someone in your family that you admire? Why? How are is that person important in your life?
- What does it mean to be persistent? How do you demonstrate persistence even though something may be challenging? Why is it important to be persistent? Do you think persistence can be learned? How so?
- Was there ever a time where you solved a problem creatively? What did you do? Why did you have to solve that problem? How did you think quickly?
- Was there a time when you took a chance on something? What did you do? What was the end result? Was it worth taking a chance? How are taking chances important in your life?

Exploring the Book

(Reading Standards, Key Ideas & Details, Strand 1; Craft & Structure, Strand 5; and Integration of Knowledge & Ideas, Strand 7)

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1 and 2)

- Book Title Exploration: Talk about the title of the book, *The Bee Tree*. Then ask students what they think this book will most likely be about and whom the book might be about. What do they think might happen? What information do they think they might learn? What makes them think that?
- Read Stephen Buchman's Biography: Read about the author inside the book after the title page. What do you think inspired him to write *The Bee Tree*? What does his process look like for writing a book? Visit his website at stephenbuchmann.com
- Encourage students to stop and jot down notes in their reading notebooks during the read-aloud when they: learn new information, see a powerful image, have an emotional reaction or an idea, have a question, or hear new words.
- Have students quickly write their feelings in their notebooks during reading. After reading, ask students why they wrote down those feelings and have them write journal entries about



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them.

- Ask students to make a prediction: Do you think this book will be fiction or nonfiction? What makes you think so? What clues are given that help you know whether this book will be fiction or nonfiction?

Setting a Purpose for Reading

(Reading Standards, Key Ideas & Details, Strands 1-3)

Have students read to find out:

- what are *The Bee Trees*
- how did prepare Nizam and Shakor to be the “ones” to climb the honey tree
- what is the story of the traditional bees
- why do the honey hunting clan hunt at night
- what process do the honey hunters go through to gather the honey

Encourage students to consider why the authors and illustrator, Stephen Buchmann, Diana Cohn and Paul Mirocha, would want to share this story about Nizam and bee trees with young people.

VOCABULARY

(Reading Standards, Craft & Structure, Strand 4)

(Language Standards, Vocabulary Acquisition & Use, Strands 4-6)

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1 and 2)

The story contains several content-specific and academic words and phrases that may be unfamiliar to students. Based on students' prior knowledge, review some or all of the vocabulary below.

Encourage a variety of strategies to support students' vocabulary acquisition: look up and record word definitions from a dictionary, write the meaning of the word or phrase in their own words, draw a picture of the meaning of the word, create a specific action for each word, list synonyms and antonyms, and write a meaningful sentence that demonstrates the definition of the word.

Content Specific

honey hunt, tualang trees, combs, rice paddies, mosque, rainforest, leather pails, clan, silver leaf monkeys, cicadas, honeycombs, sultan, metal spear, monsoon, shrubs, sarong

Academic

wound, bundled, harvest, unfurl, dense, chorus, base, arch, gazes, traditional, forbidden, transformed, draping, horrified, restored, slender, cascade, deafening, raging, swarming, soothe

AFTER READING

Discussion Questions

After students have read the book, use these or similar questions to generate discussion, enhance comprehension, and develop appreciation for the content. Encourage students to refer to passages and/or illustrations in the book to support their responses. **To build skills in close reading of a text, students should cite textual evidence with their answers.**

Literal Comprehension

(Reading Standards, Key Ideas & Details, Strands 1–3)

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1–3 and Presentation of Knowledge & Ideas, Strand 4)

1. When does the honey hunt begin?
2. Where do they collect the honey from?
3. When do the bees arrives in the rainforest?
4. What is the name of *The Bee Tree*?
5. In what months do the bees return to their nests?
6. Who is the traditional bee story about?
7. What do they call grandfather?
8. At what age did the narrator start going into the rainforest?
9. What has the narrator's job been for the past 7 years?
10. What is the place of honor in honey hunting?
11. Who is the narrator? Who is his cousin?
12. What must the cousins do to prove themselves?
13. Who does the rainforest belong to?
14. How tall is the honey tree?
15. What must they not use to cut the honeycomb according to the traditional bee story?
16. How does the grandfather encourage Nazim during the climb?
17. What do they tap the bee nest with?
18. What does the clan chant?
19. Why do the bees remain on the shrubs?
20. Who receives the first honey?
21. For how many nights to the honey hunters climb *The Bee Trees*?
22. How many pounds of honey do they gather?

- 23.** What does grandfather say to Nazim after the feast?

Extension/Higher Level Thinking

(Reading Standards, Key Ideas & Details, Strands 2 and 3 and Craft & Structure, Strands 4 and 6)

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1–3 and Presentation of Knowledge & Ideas, Strand 4)

- 1.** What does the title *The Bee Tree* mean to you after reading the book? Why do you think the authors chose this particular title?
- 2.** Why do you think people collect the honey from the bees in the Tualang trees?
- 3.** Would you join the honey hunting clan? Why or why not?
- 4.** What do you notice about the illustration of the Tualang tree?
- 5.** What job would you take on if you were a part of the honey hunters? Why?
- 6.** Why do you think Nazim is questioning whether he is brave or strong enough to climb the trees?
- 7.** How does the interaction grandfather has with the rainforest represent his respect for nature and the bees?
- 8.** Why do you think the authors included the Traditional Bee story about Hitam Manis and the spirits of the bees? Why do you think was this important for the reader to know?
- 9.** Explore the structure of *The Bee Tree*. Does the story describe events chronologically, as comparison, cause and effect, or offer problems and then solutions? Why do you think the authors structured the text the way they did? How does this story compare to other texts you have read?
- 10.** What was the overall theme or lesson you learned from reading *The Bee Tree*?

Reader's Response

(Writing Standards, Text Types & Purposes, Strands 1–3 and Production & Distribution of Writing, Strands 4–6)

Use the following questions and writing activities to help students practice active reading and personalize their responses to the book. Suggest that students respond in reader's response journals, essays, or oral discussion. You may also want to set aside time for students to share and discuss their written work.

- 11.** What is one big thought that you have after reading this book? What is your takeaway from this book? What would you tell a friend about this book?
- 12.** What do you think the authors message is to the reader? Think about possible motivations behind the authors intentions to write this book about honey bees.
- 13.** Have students make a text-to-self connection. What kind of connections did you make between the story and your own life? What do Nazim's experiences, thoughts, and feelings mean to you?
- 14.** Have students make a text-to-text connection. Did you think of any other books while reading *The Bee Tree*? Why did you make those connections?



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- 15.** Have students make a text-to-world connection. What kind of connections did you make between the text and art in the book and what you have seen happening in the world, such as on television, in a newspaper, or online? What in this book made you think of that?

ELL Teaching Activities

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1-3 and Presentation of Knowledge & Ideas, Strands 4-6)
(Language Standards, Vocabulary Acquisition & Use, Strands 4-6)

These strategies might be helpful to use with students who are English Language Learners.

- 1.** Assign ELL students to partner-read the story with strong English readers/speakers. Students can alternate reading between pages, repeat passages after one another, or listen to the more fluent reader.
- 2.** Have each student write three questions about the story. Then let students pair up and discuss the answers to the questions.
- 3.** Depending on students' level of English proficiency, after the first reading:
 - Review the illustrations in order and have students summarize what is happening on each page, first orally, then in writing.
 - Have students work in pairs to tell what they learned about one of the poems. Then ask students to write a short summary, synopsis, or opinion about what they have read.
- 4.** Have students give a short talk about which spread they identified with the most from *The Bee Tree* and why.
- 5.** The book contains several content-specific and academic words that may be unfamiliar to students, and several words are printed in bold. Based on students' prior knowledge, review some or all of the vocabulary. Expose English Language Learners to multiple vocabulary strategies. Have students make predictions about word meanings, look up and record word definitions from a dictionary, write the meaning of the word or phrase in their own words, draw a picture of the meaning of the word, list synonyms and antonyms, create an action for each word, and write a meaningful sentence that demonstrates the definition of the word.

Social and Emotional Learning

(Reading Standards, Key Ideas & Details, Strands 1-3 and Craft & Structure, Strands 4-6)

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1-3 and Presentation of Knowledge & Ideas, Strand 4)

(Writing Standards, Text Types & Purposes, Strands 1-2 and Production & Distribution of Writing, Strands 4-6)

(Language Standards, Vocabulary Acquisition & Use, Strands 6)

Social and emotional learning involves being aware of and regulating emotions for healthy development. In addition to understanding one's own feelings, strong socio-emotional development allows individuals to develop empathy for others and to establish and maintain relationships.

Use the following prompts to help students study the socio-emotional aspects of this book.

1. How does Nazim overcome his doubts about being able to climb the tualang tree throughout the book? Provide evidence from the text with different events to show how he used determination to get through a challenging time
2. Who supports Nazim through this honey hunt? Provide evidence from the text with different events to show who all supported Nazim on his first tree climb
3. Choose an emotion that interests you: happiness, sadness, fear, anxiety, faith, hope, or perseverance. Illustrate or act out what that emotion looks like in *The Bee Tree*.

INTERDISCIPLINARY ACTIVITIES

(Introduction to the Standards, page 7: Students who are college and career ready must be able to build strong content knowledge, value evidence, and use technology and digital media strategically and capably)

Use some of the following activities to help students integrate their reading experiences with other curriculum areas. These can also be used for extension activities, for advanced readers, and for building a home-school connection.

English/Language Arts

(Reading Standards, Key Ideas and Details, Strands 1-3, Craft and Structure, Strands 4-6, Integration of Knowledge & Ideas, Strands 7-9, Range of Reading of Text Complexity, Strand 10)

(Writing Standards, Text Types & Purposes, Strands 1-3, Production & Distribution of Writing, Strands 4 and 6, Research to Build & Present Knowledge, Strands 7-9, Range of Writing, Strand 10)

(Speaking and Listening Standards, Comprehension and Collaboration, Strands 1-3, Presentation of Knowledge and Ideas, Strands 4-6)

- **Have students come up with a list of questions to ask authors Stephen Buchmann and Diana Cohn.** What do students want to know about the process behind writing a children's book? How did they come up with the idea to write *The Bee Tree*? What research did they do? Were they inspired by events from their own life?
- **Ask students to read through the text as well as the Afterword of *The Bee Tree* and to then create an informational poster about the Giant Honey Bees in Malaysia.** Using information from the book and additional research, students can create posters using photographs, facts, diagrams, and informative captions. What does the Giant Honey Bee look like? Where does it live? What does it eat? Students can share their posters with small groups, the whole class, or the school at large.

- **Have students write an essay answering the following questions:** Why do you think it is important for communities like the one in Malaysia where the people treat nature with respect? Find examples from the story and describe why you think this is important for the future of bees and rainforests.
- **Encourage students to conduct more research on the Traditional Bee Story of Hitam Manis.** What is the meaning behind the story? Why is it important to the Honey Hunters? How does the meaning of the story relate to the quest to get honey? How does The Traditional Bee Story of Hitam Manis relate to their or life in their community? Have students write down their findings and notes.
- **Tell students to imagine they will be interviewing honey hunters for a local newspaper or talk show.** Ask students to develop a list of five interview questions they want to ask. What do they want to learn about the honey hunter's daily work, their interactions with the bees, and more? Lead a class discussion, creating a combined list of questions and then narrowing that list down to ten essential questions.
- **Have students read Parrots over Puerto Rico** (<https://www.leeandlow.com/books/parrots-over-puerto-rico>). Ask students to compare and contrast each book. What is the central idea of each book? How are the books connected? What themes or ideas do they share? Have students plan their thoughts in a graphic organizer and write an analytical essay afterwards.

Social Studies/Geography

(Reading Standards, Key Ideas and Details, Strands 1–3, Craft and Structure, Strands 4–6, Integration of Knowledge & Ideas, Strands 7–9, Range of Reading of Text Complexity, Strand 10)

(Writing Standards, Text Types & Purposes, Strands 1–3, Production & Distribution of Writing, Strands 4 and 6, and Research to Build & Present Knowledge, Strands 7–9, Range of Writing, Strand 10)

(Speaking and Listening Standards, Comprehension and Collaboration, Strands 1–3, Presentation of Knowledge and Ideas, Strands 4–6)

- **Have students research the geography of Malaysia.** What is the climate like? What physical features does Malaysia have? What kinds of plants and animals live there? What makes Malaysia unique from other states in the United States? Students may present their findings with photographs in a visual presentation format of their choosing. Consult National Geographic Kids' "Malaysia" page for more information (<https://kids.nationalgeographic.com/geography/countries/article/malaysia>).
- **Encourage students to learn more about the Orang Asli – the indigenous people of Malaysia.** Who are the Orang Asli? How do they feel about the animals and plants of the forest? What issues do the indigenous people of Malaysia currently face? Here are a few resources with more information their website on the Orang Asli and the Malays (https://historycorps.lib.uiowa.edu/exhibits/show/indigenousstruggles1900/orang_asli) and (<https://theculturetrip.com/asia/malaysia/articles/the-history-of-malaysias-orang-asli-people/>).
- **Have students research the country of Malaysia and write down the different facts of the country.** What language do they speak? What is the capital of Malaysia? What type of government do they have? What types of religions are observed in the country? How many people live in Malaysia? What types of foods and dishes are native to Malaysia? What is something interesting you have learned about Malaysia? (<https://www.kids-world-traveler.com/countries/malaysia.html>)

guide.com/malaysia-facts.html).

Science/STEM

(K-ESS3-3 Earth and Human Activity: Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment; MS-LS2-5: Ecosystems: Interactions, Energy, Dynamics: Evaluate competing design solutions for maintaining biodiversity and ecosystem services;

(MS-PS3-4: Energy: Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample)

- **Encourage students to research honeybees.** Describe this species' habitat in addition to their other characteristics. What does they eat? What are its predators? What impact have humans had on honeybees? What is being done to protect the bee population? Read more about the Honeybee over at National Geographic (<https://www.nationalgeographic.com/animals/invertebrates/facts/honeybee>).
- **Not all bees produce honey like the honeybees in *The Bee Tree*.** There are over 20,000 kinds of bees in the world. Encourage students to research what types of bees live in their country. How are they different from the bees that live in Asia? How are they similar? Students can capture their findings on a Venn Diagram or in their science journal. You can find more information on the bees in the U.S here (<https://www.usgs.gov/faqs/how-many-species-native-bees-are-united-states>). You can find out more about the bees in Asia here (<https://th.boell.org/en/2020/02/13/native-honey-bees-southeast-asia-and-conservation-challenges>).
- **According to the Center for Biological Diversity,** (<https://www.biologicaldiversity.org/campaigns/saving-the-insects/native-bees.html>) **more than half of North America's 4,000 native bee species are in a decline, with 1 in 4 species at risk of extinction.** Have students research what is being done to protect and restore the bee population in North America. Then have students create a poster or flyer to present their findings. Why are bees so important to agriculture? How do they impact food security? The Bee Conservancy provides great information about the efforts being done to protect bees and what benefits bees provide for Earth (<https://thebeeconservancy.org/why-bees/>).
- **Conduct a video study and have students observe the life cycle of a Honeybee.** Students can watch a time-lapse of bees hatching. Have students jot down the phases that they learn about in the video. (<https://www.youtube.com/watch?v=f6mJ7e5YmnE>)
- **Have students research the process that bees go through to make honey.** The process to make honey is one that requires a great amount of teamwork and organization from bees. What are the steps? What is necessary for bees to make honey? Have students jot down their findings in their notebook. If time allows, students can present their findings to their class or partners. (<https://theconversation.com/curious-kids-how-do-bees-make-honey-143450>)
- **Malaysia is close to the equator which means that there aren't true seasons, there are only wet and less wet times of the year.** Have students to research the tropical rainforest and why being close to the equator means increased rainfall and have them describe what the tropical biome is like. Why is this biome a great environment for different species? How many different types of tree species are there in the Malaysian rainforest?

Students can write down their findings in their notebook. Check out this resource where students can begin their research (<https://earthdata.nasa.gov/learn/sensing-our-planet/rooting-out-rainfall>).

- **The Honey Hunters climb the Tualang tree in *The Bee Tree*.** Have students research different facts about the Tualang tree. What is special about this tree? What are they known for? What interesting facts did you discover while researching? Blue Planet Biomes is a great resource to start learning more about the Tualang Tree (<https://www.blueplanetbiomes.org/tualang.php>) (<https://www.nparks.gov.sg/florafaunaweb/flora/2/9/2983>)

Art/Media

(Reading Standards, Integration of Knowledge and Ideas, Strands 7 and 9)

(Writing Standards, Text Types & Purposes, Strands 1-3, Production & Distribution of Writing, Strand 4, and Research to Build & Present Knowledge, Strands 7-9, Range of Writing, Strand 10)

(Speaking and Listening Standards, Comprehension and Collaboration, Strands 1-3, Presentation of Knowledge and Ideas, Strands 4-6)

- **Have students create a drawing, painting, or other visual representation of something nature that they admire.** Why did they choose this to illustrate? What does it mean to them?
- **Encourage students to select an illustration that resonated with them from the story.** Have students write a reflection about that illustration. What stood out to them? How did it make them feel? What did it make them think about?
- **Illustrator Paul Mirocha traveled to Malaysia to capture the true beauty of the Malaysian rainforest, there is a picture of him in the afterward admiring the Tualang tree.** Inspire students to go outside, observe and sketch something that they see in their immediate surroundings. Then have students reflect on why they chose to illustrate that specific object.
- **Conduct an illustrator study on Paul Mirocha. Have students examine the book.** Explore his website (<https://paulmirocha.com/books-illustrated/>). What materials does it look like the illustrator used to make his illustrations? Invite students to make their own illustrations with a similar art medium. Have students reflect on the medium, time involved, and process of making their illustration. After the discussion, ask students to write up their reflection, including an answer.

School-Home Connection

(Reading Standards, Integration of Knowledge and Ideas, Strands 7 and 9)

(Writing Standards, Text Types & Purposes, Strands 1-3, Production & Distribution of Writing, Strand 4, and Research to Build & Present Knowledge, Strands 7-9, Range of Writing, Strand 10)

(Speaking and Listening Standards, Comprehension and Collaboration, Strands 1-3, Presentation of Knowledge and Ideas, Strands 4-6)

- **If possible, provide students with a copy of *The Bee Tree* (<https://www.leeandlow.com/books/the-bee-tree>).** Encourage family members to read the picture book at home. Have students and their families talk about what hard work, respect and nature conversation mean to them.
- **Encourage families and children to learn more about the honey that is produced in the Tualang trees in Malaysia.** How is this honey different from the honey in the United

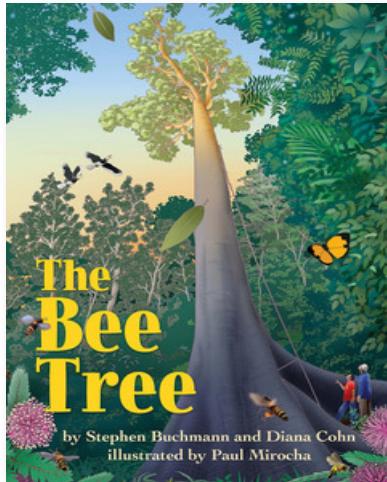


The Bee Tree

Teacher's Guide leeandlow.com/books/the-bee-tree

States and other parts of the world? What type of honey do they have at home?

- **If possible, plan a field trip with families to a nearby bee sanctuary.** Ask students to take field notes while they explore and observe their surroundings and think about why this place is important to both the bees, environment and humans. What do you see, hear, smell, and/or feel? Encourage students to write a reflection essay and include sensory words to capture how special it is. Here are a few bee sanctuaries in NYC (<https://thebeeconservancy.org/bee-sanctuaries>)



The Bee Tree

Teacher's Guide leeandlow.com/books/the-bee-tree

ABOUT THE AUTHORS

Stephen Buchmann is a pollination biologist, photographer, and adjunct professor of ecology and evolutionary biology at the University of Arizona in Tucson, where he studies buzz pollination and the microbiomes of bees. He is the author of eleven books, including *The Forgotten Pollinators* and *The Reason for Flowers*. A frequent guest on many public media programs, he lives in the Sonoran Desert of Arizona. Please visit his website at stephenbuchmann.com.

Diana Cohn has worked on environmental, economic, and global justice issues as a teacher, a media activist, and an advisor, program officer, and executive director in philanthropic institutions. She is the award-winning author of seven children's books, including *¡Si Se Puede! / Yes We Can! Janitor Strike in L.A.*, *The Bee Tree*, and *Crane Boy*, all published by Cinco Puntos Press/Lee & Low. She lives with her husband on a houseboat in northern California.

Ordering Information

General Order Information: leeandlow.com/contact/ordering

Secure Online Ordering: leeandlow.com/books/the-bee-tree

By Phone: 212-779-4400 ext. 25

By Fax: 212-683-1894

By Mail:

Lee & Low Books, 95 Madison Avenue,
New York, NY 10016

ABOUT THE ILLUSTRATOR

Paul Mirocha creates artwork noted for its combination of rich detail and emotional appeal. He has illustrated more than twenty children's picture books and pop-ups, and his illustrations have appeared in interpretive exhibits, scientific and popular publications, and books of adult and young adult fiction and contemporary nature writing. He lives in Tucson, Arizona. You can find his website at paulmirocha.com.

REVIEWS

"Readers can see the real Pak Teh, the towering trees, and the huge comb wax nests, and learn more about the indigenous people, the giant honey bees, and the rainforest ecosystem." —*School Library Journal*

"[A] fictional picture book with a coming-of-age theme filled with wondrous double-spread paintings..." —*Kirkus Reviews*

"[A]n excellent resource to include in an integrated curriculum unit about the rain forests or about pourquoi legends." —*Children's Literature*

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