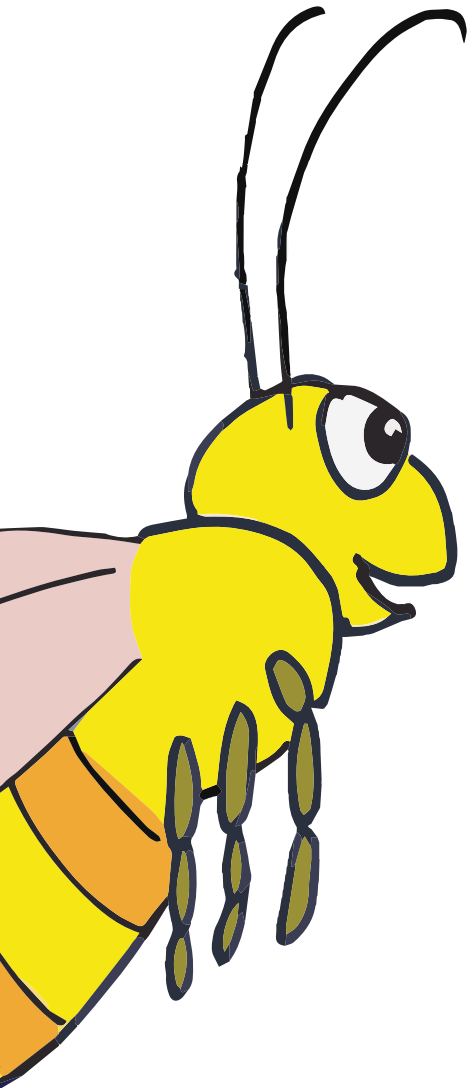


Written and illustrated by
Sissi Lozada Gobilard

Stories About Endangered Plants

ANTENITA AND THE BLACK IRIS



About the book series “Stories About Endangered Plants”

Before you lie a children's book brought to life through the collaborative efforts of the COST Action ConservePlants. Comprised of dedicated researchers from Europe and beyond, ConservePlants is at the forefront of protecting endangered plant species. Our researchers are committed not only to their scientific work but also to sharing knowledge with people of all ages, especially children. And what better way to captivate young minds than through stories!

Within this collection, we proudly showcase the captivating tales of endangered plants, lovingly penned by our passionate researchers. These stories offer a unique window into the lives of these remarkable plants, providing valuable insights into their importance and the challenges they face. Each narrative is crafted to both entertain and educate, fostering a love for nature and promoting conservation.

Join us on an exciting journey of discovery as we explore the wonders of the natural world through these stories. Immerse yourself in the captivating narratives and vivid illustrations that bring these endangered plants to life and embark on a quest to protect and preserve the remarkable biodiversity of our planet.

Živa Fišer, ConservePlants Action Chair



This publication is based upon work from COST Action CA18201 - An integrated approach to conservation of threatened plants for the 21st Century, supported by COST (European Cooperation in Science and Technology).

COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

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Stories About Endangered Plants

ANTENITA AND THE BLACK IRIS

Written and illustrated by **Sissi Lozada Gobilard**

In the far Middle East, flowers blossoming indicate that winter is over.

Small solitary bees are starting to wake up after a long winter.

“Antenita! Wake up!” shouts Abi through the hole.

“You don’t want to be left all alone, do you?” said Hakim.

Hakim, Abi and Antenita were very good friends.

Hakim was the oldest bee. He had more experience in travelling long distances and would know exactly where to find the most delicious and sweetest nectar offered by the flowers.



Antenita,
Wake up!
Spring is here!

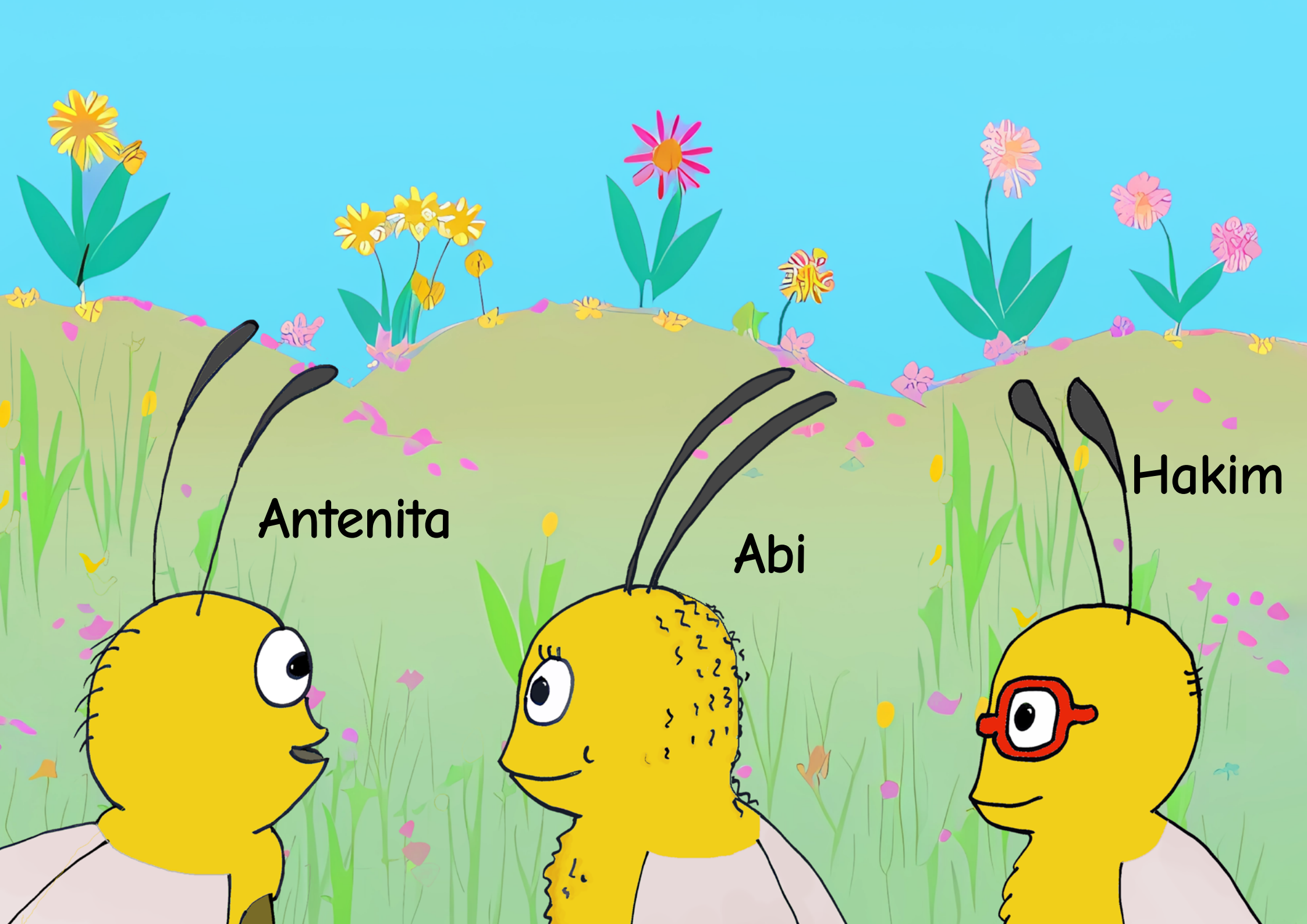
Abi was the enthusiastic one. She could fly around from flower to flower without getting tired and would remember exactly which path to be repeated the next morning.

Antenita was the youngest among them. For him, searching for nectar was a new thing. It was his first time, and he was very excited. Finally, he was old enough to collect food on his own!

He shook his head, cleaned his long antenna and he was ready for action. Antenita went out of the hole and saw a beautiful view of many flowers and colors.

“Spring time!” he thought, “my favourite season of the year!”

“C’mon!” shouted Abi, “I will show you the best flowers!”



Antenita

Abi

Hakim



Look at this!
I'm going in!

The three friends started their search for nectar together. However, Antenita could not keep up with them and decided to fly around on his own.

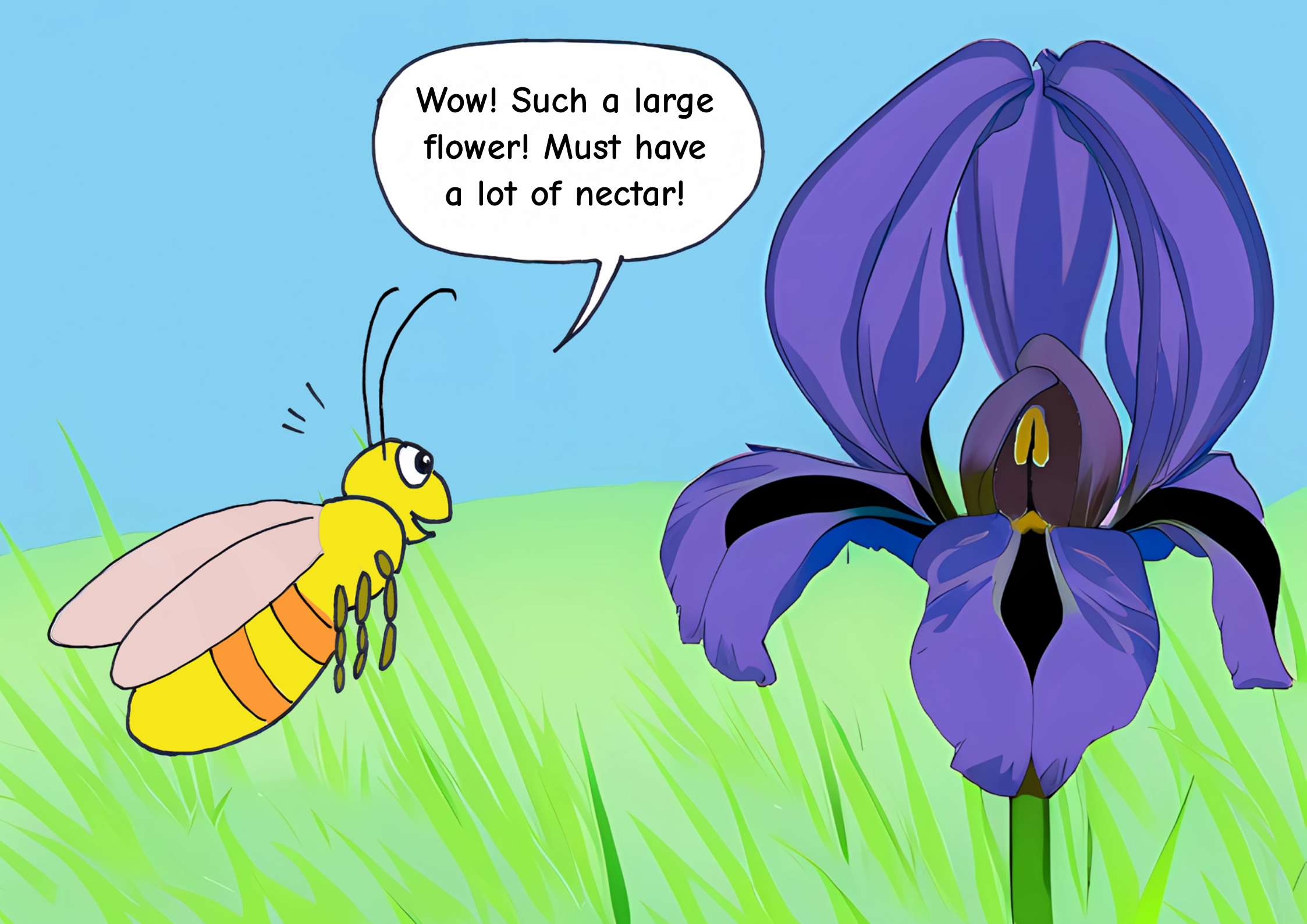
“I will catch up with you later!” he said to Abi and Hakim.

“Ok! Have fun!”

He was flying around searching for the most exquisite flowers.

Some flowers showed clear indications of where to land and where to get the nectar from, others were not so obvious, but they would hide delicious nectar nonetheless.

Antenita was so happy, going from flower to flower.

A cartoon illustration of a yellow bee with pink wings and orange and yellow stripes on its abdomen, flying towards a large purple flower. The bee has a surprised expression with wide eyes and a small open mouth. A speech bubble above the bee contains the text "Wow! Such a large flower! Must have a lot of nectar!". The flower is a large, purple iris-like flower with dark purple and black markings on its petals. The background is a simple blue sky and green grass.

Wow! Such a large
flower! Must have
a lot of nectar!

“This one was very sweet!” he said.

“I will definitely come back here tomorrow for more!”

After getting nectar from different flowers, Antenita was covered in a strange yellow powder.

“AAAhhhchú... what is this?” he wondered, “every time I get nectar, I am covered in this yellow powder... I will ask Hakim later about it, I am sure he would know.”

Suddenly Antenita saw a beautiful, big, dark purple, almost black flower.

“Wow!”he exclaimed, “I am sure this big one will have delicious abundant nectar.”

Antenita flew around the gorgeous flower, it had three big stand-up petals and three falling ones with a black spot in front of an entrance.

“It must be here,” he thought.


He landed on one of the black spots and went inside curiously.

Suddenly, he heard a calm and soft voice:

“Hello little one, you are early today,” spoke kindly the flower.

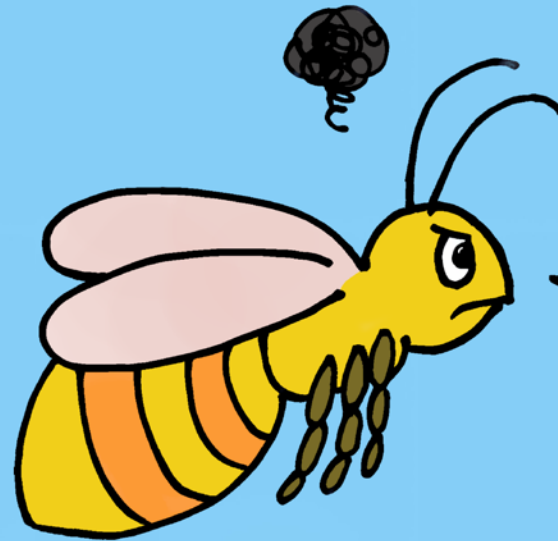
“Early?” Antenita replied, “Early for what? I just came for the nectar.

Where is it?”

A cartoon illustration of a yellow bee with orange stripes and white wings, positioned inside a large purple flower. The bee has a confused expression, with a question mark floating next to its head. A speech bubble above the bee contains the text "Where is the nectar?". The flower's petals are a vibrant purple, and the background is a solid light blue.

Where is
the nectar?

?



No nectar?!
This was
a waste of time!

You will need
me later...

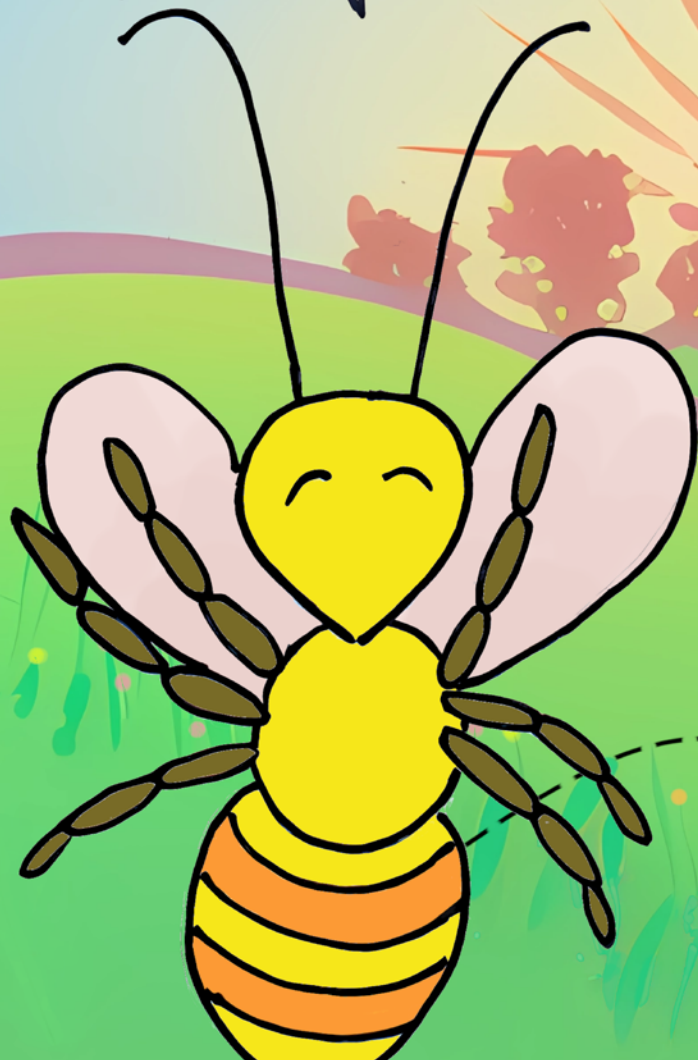
“I am not like the other flowers,” the flower replied. “I do not produce any nectar, but I can offer a different kind of...”

“No nectar?!” Antenita interrupted. “How are you so big, but you do not have any nectar? This was a complete waste of time!”

Antenita flew away from the flower angry and confused.

“You will need me later,” said the flower wisely, but Antenita was already gone.

I'm so tired!
I need a place
to sleep.



Hours went by, the sun went down, and Antenita felt exhausted. He had no idea how much he had been flying from flower to flower, but he was ready to rest.

“Where do I spend the night now?” he asked himself.

“I am too far from my home, I need to find a shelter.”

He tried to find a place to spend the night but couldn't find anything.

“Oh dear! I am so tired,” he said.

“Where are my friends Hakim and Abi?”

Antenita lost track of time and his friend bees, and suddenly found himself alone and without any shelter, so he fell asleep on the bare ground.

It's freezing!
I'm so cold!



The next morning

What happened?

Why didn't you
sleep in
a black iris?

Antenita,
is that you?



The next morning...

“Antenita, is that you?” Abi asked.

“What happened? Are you ok?” Hakim asked carefully.

Antenita woke up, it was already late, and all the bees have already been flying around, searching for nectar.

“Hi guys,” replied Antenita wearily.

“Yes, I am ok but I did not sleep very good,” Antenita said holding his head.

“Yesterday I was so tired that I fell asleep here on the ground, but later at night I woke up because it was freezing. I was trembling and now I do not feel very good.”

“Oh no, not good,” said Hakim, “did you not find a black iris to spend the night in?”

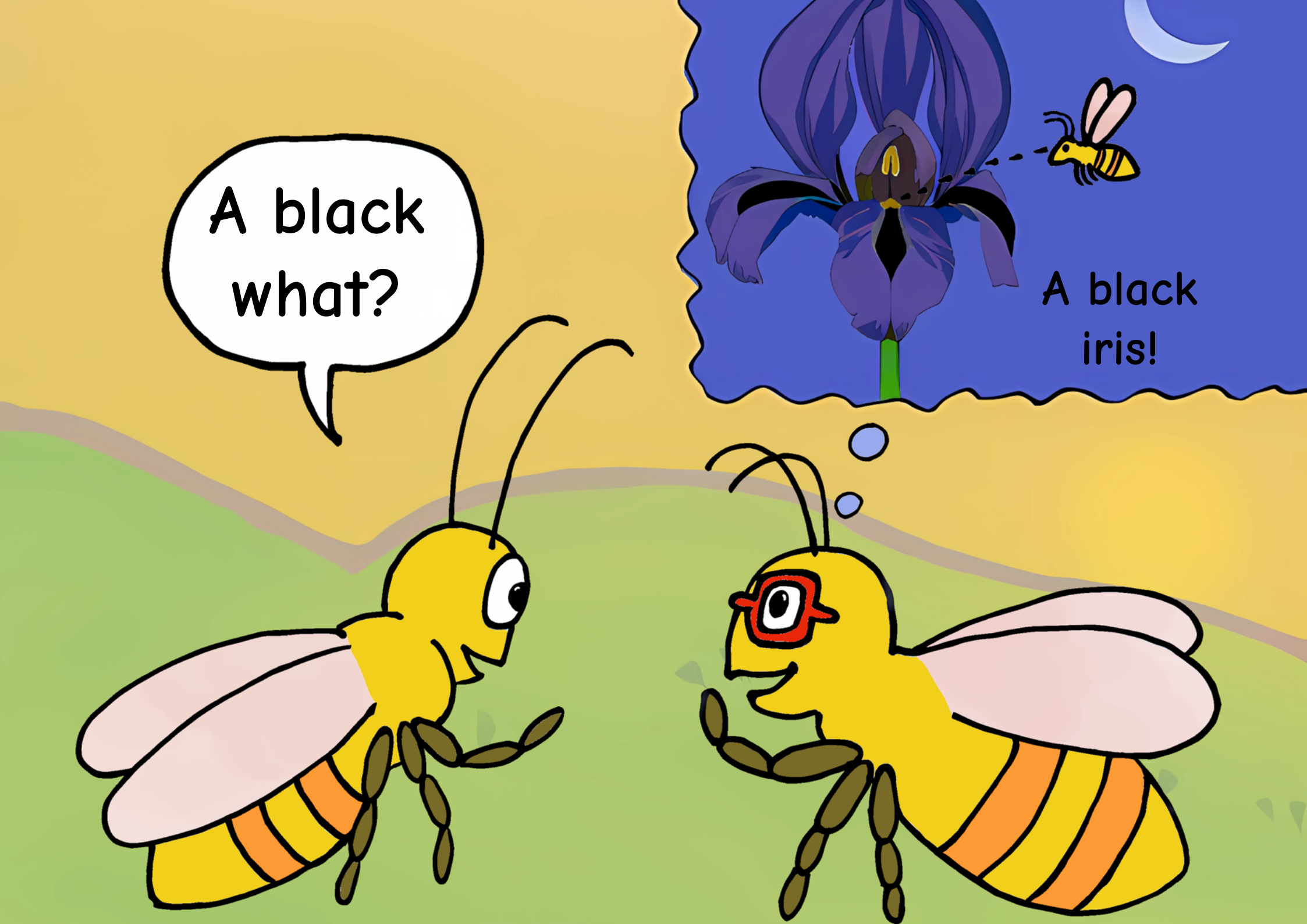
“A black what?” asked Antenita confused.

“A black iris,” continued Hakim. “Black irises are these big, beautiful, dark purple almost black flowers that offer shelter for us to spend the night. Did you not see them around?”

“Ehmm..no,” lied Antenita, but he knew exactly which kind of flower Hakim was referring to ...

“These black irises do not offer us any nectar, instead they offer us a place to spend the night,” said Hakim.

“Yes!” interrupted Abi. “And they even have a dark spot signal to show us the entrance to the shelter!”



A black
what?

A black
iris!

“You can choose among three tunnels inside the flowers, I would recommend taking the east-facing one.”

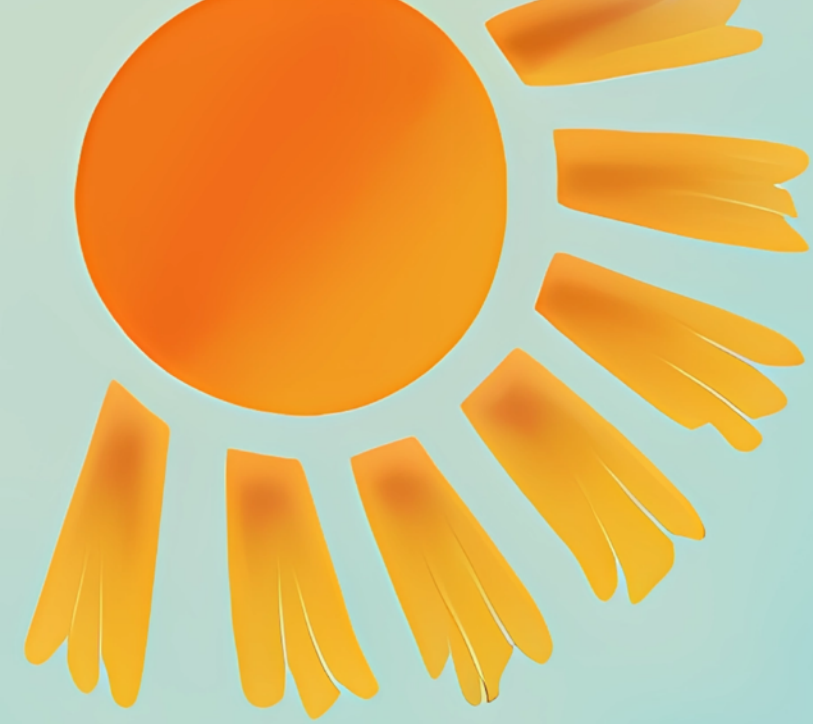
“Why is that?” asked Antenita.

“The east-facing tunnel will receive direct sun the next morning”, replied Abi. “This heat helps us to get our temperature higher and be ready for flying sooner.”

“Ohh..I see,” said Antenita, and “what is this yellow powder I get after drinking nectar.”

“It’s pollen!” Said Hakim. “You see, Antenita, the flowers need us as much as we need them. They offer us nectar but in return they expect us to transport their pollen to another related flower. That is how they reproduce.”

“But as you know now,” continued Hakim, “not all flowers offer the same kind of reward, like nectar, some of them, such as the black iris offer..”



“Shelter!” finished Antenita.
“Exactly,” said Hakim.

Welcome back, little one.

I'm sorry!



That day, Antenita could not stop thinking about the black iris he visited the day before, and later that day he decided to go back to her.

“Welcome back little one,” the flower said.

“Ehmm, hi ...” replied Antenita. “I... ehmm.. I... I came to apologize. My behaviour was wrong and I judged you without knowing about the type of reward you offer. I should not have been angry at you, I am sorry.”

“It is ok, I accept your apologies,” said the black iris.

“May I stay here tonight?” asked Antenita with a broken voice.

“Yes, you can stay here overnight, but before you do, I would like you to go and fly around other black irises so you can bring me the pollen I need. You still have some time before the sunset.”

“Absolutely! I can definitely do that,” replied Antenita and flew away. Antenita visited a few other black irises and got some pollen on his back.

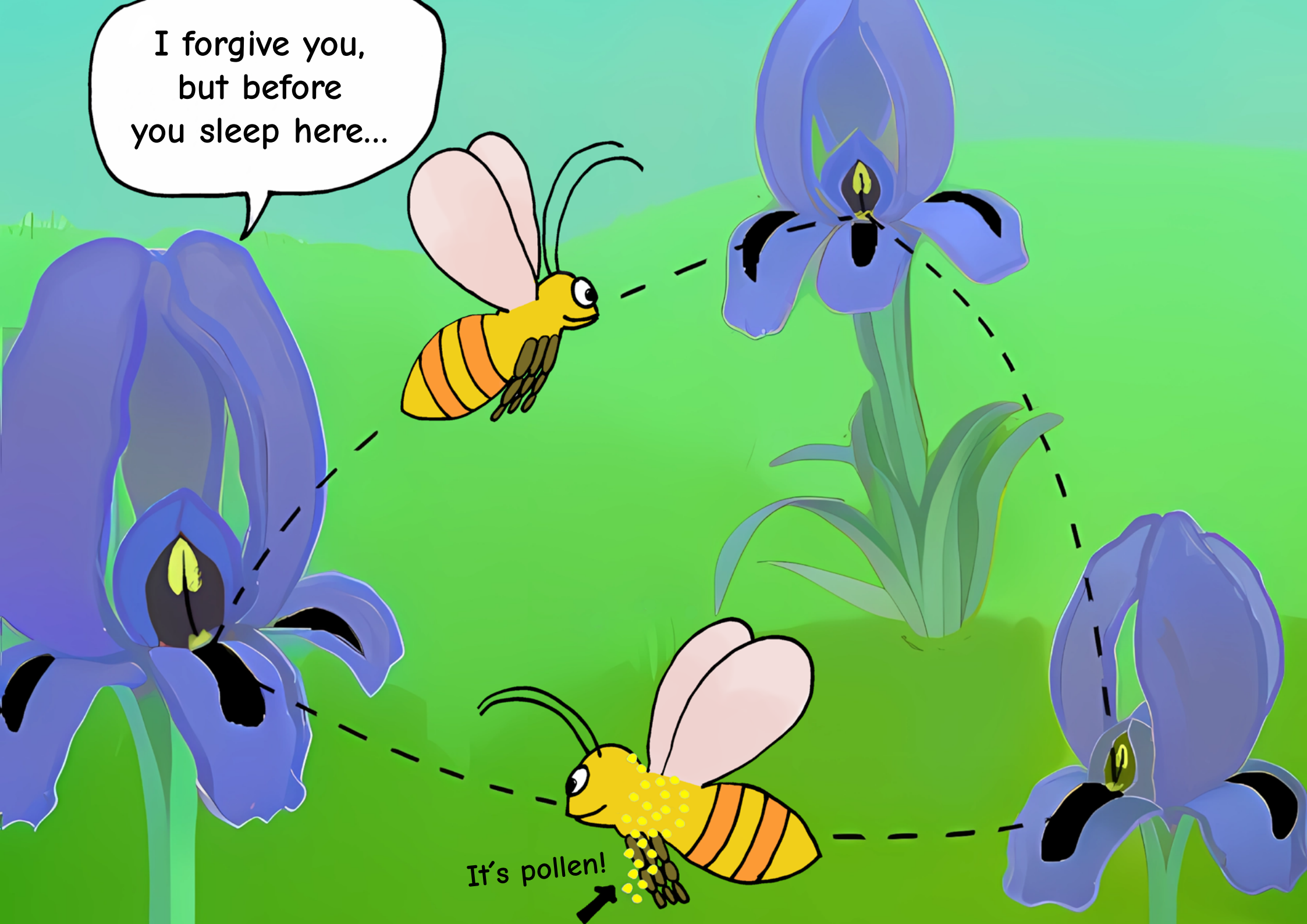
“I hope this will be enough,” he thought.

Antenita came back to the black iris. “I got some pollen for you!” he said excited, and he shook his body in the three tunnels just to be sure.

“I hope this is ok,” Antenita said, “may I sleep here now?”

“Thank you for the pollen,” said the iris. “Now you can sleep inside. I wish you a beautiful rest, my little one.”

I forgive you,
but before
you sleep here...



It's pollen!

One day, after a long
day of searching for nectar...



Days passed by like this. Antenita comes back to the black iris just before sunset after a long day of nectar searching but is sure to visit a few other black irises before, to bring pollen.

They became good friends.

One day Antenita wanted to tell his friend about a new flower whose nectar had a peculiar taste. He came back to the black iris but he could not find her.

Instead, he found a very wilted flower with a developed fruit with many seeds inside.

He saw a note around the fruit. He took it and read:

Dear Antenita,

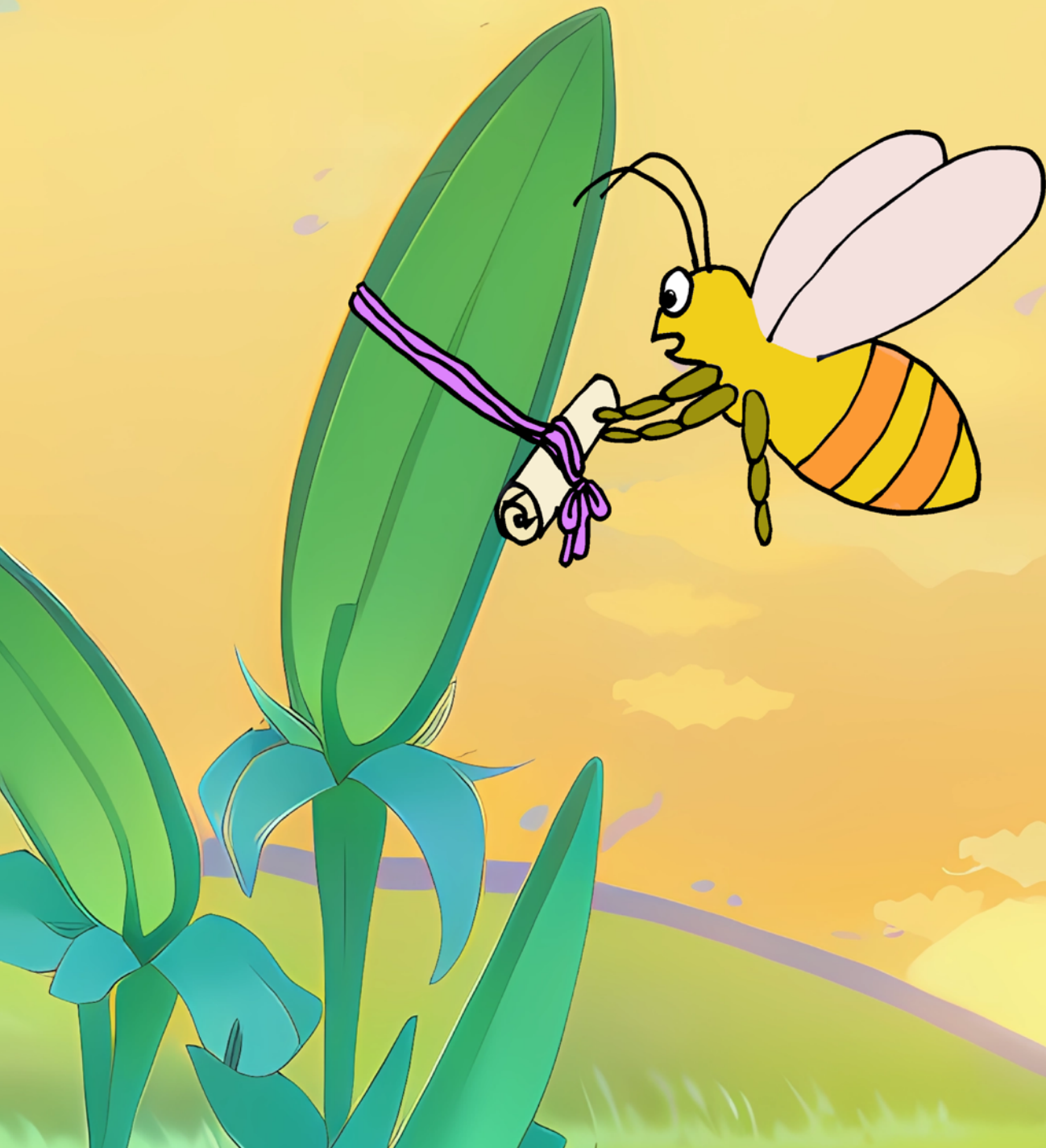
If you are reading this, it is because a part of me is gone, but a new stage begins.

We spent a wonderful time together and became such great friends. I will miss you.

Thanks to your hard work of flying from iris to iris, I could find compatible healthy pollen and produce fruits and seeds. Because of you my seeds will germinate and next spring there will be new beautiful black irises to spend the night.

My family and I will always be very grateful.

*With love,
Iris*



Dear Antenita,

See You next
spring.

Your friend,
Iris.

Antenita finished reading the note. He had a few drops of tears in his eyes
but was happy as he could help her.
“I will miss you too, dear friend,” he said and flew away hoping to meet the
next generation of friendly black irises next spring.

A cartoon illustration of a bee with a yellow and orange striped body and large pink wings, flying over a green field. The background features a vibrant sunset sky with orange and yellow clouds and rays of light. A speech bubble is positioned to the right of the bee, and a pink banner with the words 'THE END' is at the bottom right.

Goodbye,
dear friend

THE END



Photo: Yuval Sapir

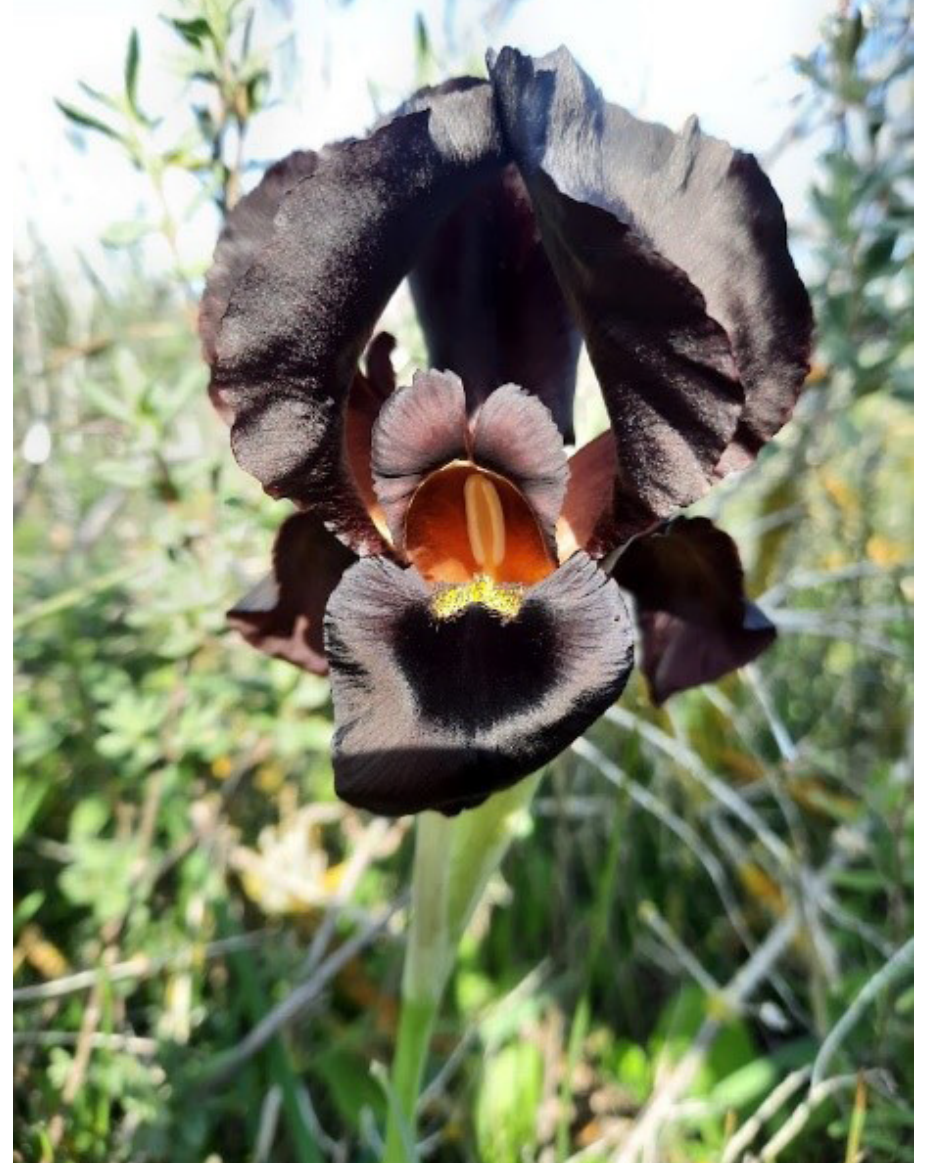


Photo: Sissi Lozada Gobillard

Scientific note

The scientific name of the Black iris is *Iris atropurpurea*. This species is endemic to the Middle East and belongs to a group of rare, beautiful species commonly called Royal irises. The black iris is a very large flower up to 50 cm² and, its color varies from purple to dark almost black. The flower structure consists of three up “standard” petals and three lower “fall” petals with a black spot. The style is modified into a petal-like that forms a “tunnel” in front of the black spot over the fall petals. Unlike their relatives, royal irises, do not produce any nectar, yet they depend on pollinators for their reproduction since they are self-incompatible. They are pollinated by *Eucera* male wild bees. *Eucera* bees hibernate during winter in holes underground and wake up in spring. These bees use the iris flowers as a shelter overnight. Before sunset, the bees look for a place to sleep and fly from flower to flower, presumably moving pollen and pollinating them. Research has also shown that bees prefer to sleep in the tunnels facing east since these face the sun directly the next morning and heat the flower fast. The heat helps the bees with their metabolism allowing them to fly earlier compared to those that overnight on the bare ground.

About the author/illustrator

Sissi Lozada Gobilard is an evolutionary ecologist born and raised in the high mountains of Bolivia. For more than a decade, Sissi has been studying plants and their pollinators in places like Bolivia, Germany, Czech Republic and Israel. During her postdoctoral stay at Tel Aviv University working with the beautiful endemic irises of Israel, she got the inspiration to write this story. Currently, she lives in Sweden working at Lund University on her own project on plant-pollinator interactions in altitudinal gradients in the tropics of Bolivia. Sissi is very passionate and enthusiastic about plants and engaged with science communication. This book is the first of its kind and hopes to educate and entertain both children and parents. Sissi loves ice cream and dancing, enjoys singing with her little son and husband, and going swimming once in a while.



Photo: Roni Gafny

These stories about endangered plants form a collection that is the final result of the project “Children’s book as an strategy for plant conservation” which started with the idea for “Antenita and the Black Iris” story back in 2021. Sissi is very grateful with all the authors and illustrators of the independent stories, and with people from COST Action CA18201 who supported this project making it real. She also thanks all members of Sapir Lab for their support and her friend Michelle Talal for checking the English language. Sissi is also very grateful for the unconditional support of her beloved husband, and she dedicates this story to her little sweet baby boy.

Stories About Endangered Plants

Antenita and the Black Iris

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