

Sinai Baton Blue

The story of the smallest butterfly



Ministry of State For Environmental Affairs



**BIODIVERSITY MONITORING
& ASSESSMENT PROJECT
(BioMAP)**

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WHY THIS BOOK?

The Sinai Baton Blue Butterfly is the first in a series of stories about real animals and plants. It is considered to be the smallest butterfly in the world, and occurs only in the mountainous region of the St Katherine Protected Area in Sinai.

The butterfly is threatened by some factors that may lead to its extinction, namely: climate change, overgrazing, and plant collection for medicinal purposes.

This story tries to make the reader aware of the dangers threatening the butterfly, and how to handle them. In addition the reader is introduced to the life cycle of the butterfly and the thyme flowers which provide the butterfly with nectar. Moreover, s/he learns about St Katherine Protected Area and the role Protectorates play in preserving wildlife and Egyptian habitats.

This story is for young people between 9 to 12 years old. Extra information is added at the end of the book about the butterfly and other organisms coexisting in its habitat.

We hope through these publications to raise a new generation well aware of biodiversity and natural history, and in addition to help it discover how amazing the inter-relations are between organisms. We also hope readers get to know the importance of preserving other organisms, because they share with us the same planet Earth, they have an equal right to survival, and they share in maintaining the balance of nature.

We aim to draw to the attention of decision makers, international and local institutions and national organizations concerned with biodiversity, the importance of bringing efforts together, taking measures for protecting these treasures, and putting an end to threats. This will help Egypt to keep to international and national agreements.

AUTHORS

Sinai Baton Blue

The World's Smallest Butterfly Story

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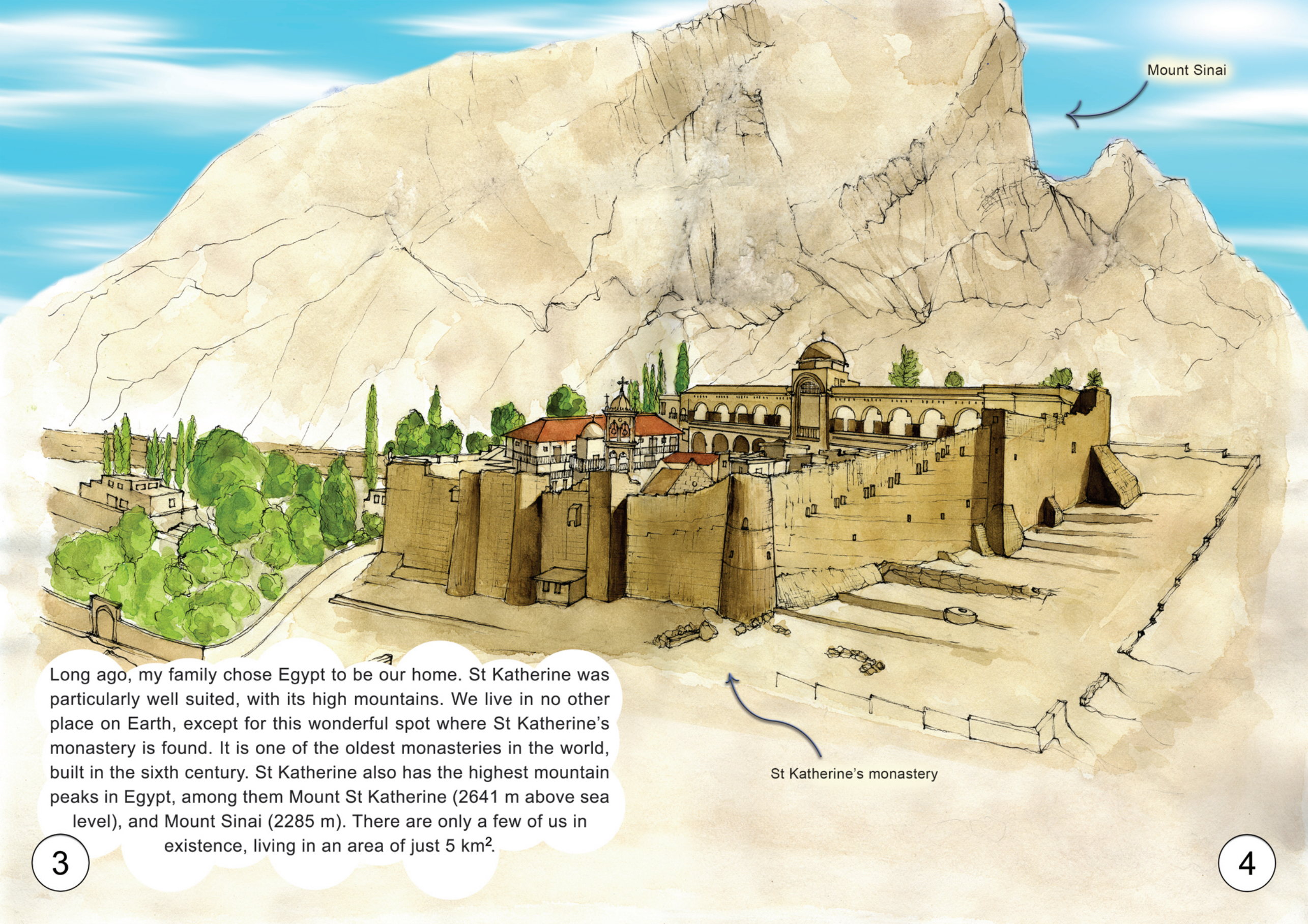
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My name is Farfousha.
I am a beautiful little butterfly.
I am azure in colour, with black and bright orange spots on my wings. The length of my wings is no more than 7.5 mm.
I am competing for the title "The World's Smallest Butterfly". The Egyptians call me the "Sinai Little Blue Butterfly". There is nobody like me in the whole world.

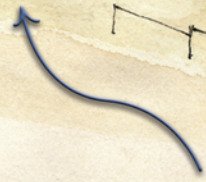




Mount Sinai



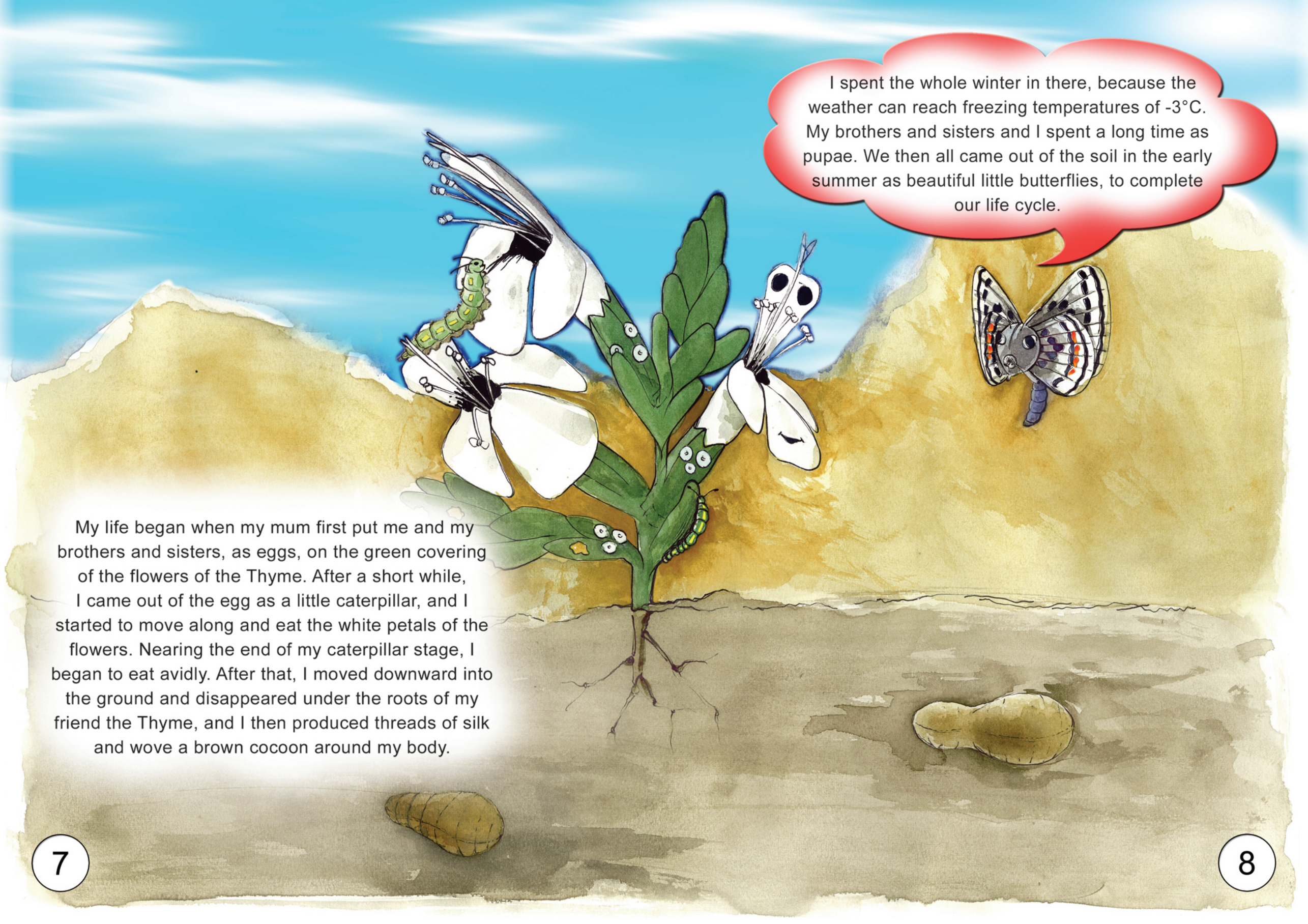
St Katherine's monastery



Long ago, my family chose Egypt to be our home. St Katherine was particularly well suited, with its high mountains. We live in no other place on Earth, except for this wonderful spot where St Katherine's monastery is found. It is one of the oldest monasteries in the world, built in the sixth century. St Katherine also has the highest mountain peaks in Egypt, among them Mount St Katherine (2641 m above sea level), and Mount Sinai (2285 m). There are only a few of us in existence, living in an area of just 5 km².

We love to eat the nectar of the Thyme plant, a plant with white flowers that lives only on the St Katherine mountain range and on the Hejaz Mountains in Saudi Arabia. It blooms in May and June, when we are adult butterflies. During this time, we are very active and work hard; we eat, mate and lay eggs that give rise to new butterflies.





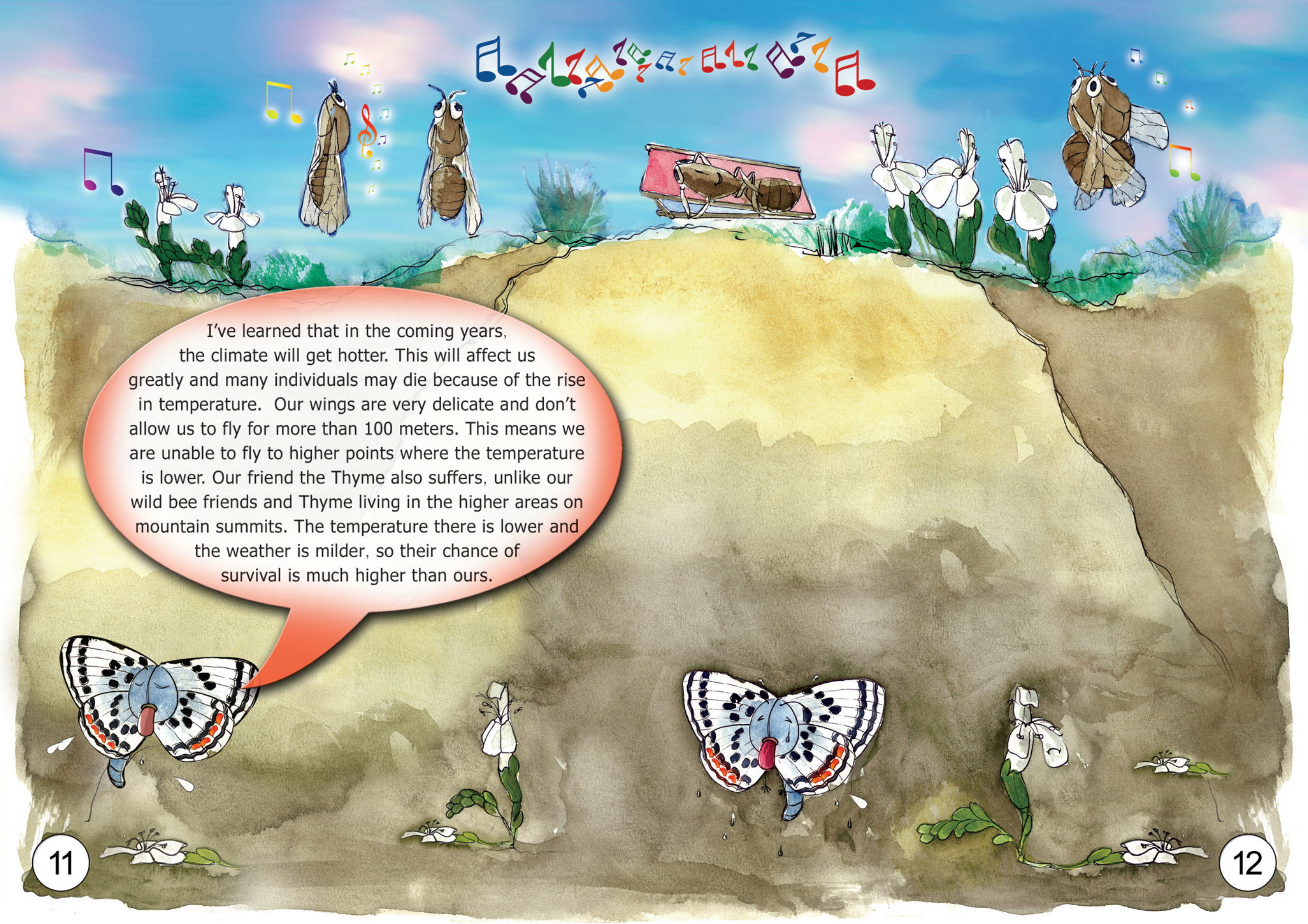
My life began when my mum first put me and my brothers and sisters, as eggs, on the green covering of the flowers of the Thyme. After a short while, I came out of the egg as a little caterpillar, and I started to move along and eat the white petals of the flowers. Nearing the end of my caterpillar stage, I began to eat avidly. After that, I moved downward into the ground and disappeared under the roots of my friend the Thyme, and I then produced threads of silk and wove a brown cocoon around my body.

I spent the whole winter in there, because the weather can reach freezing temperatures of -3°C . My brothers and sisters and I spent a long time as pupae. We then all came out of the soil in the early summer as beautiful little butterflies, to complete our life cycle.

When I was a caterpillar, I produced a honey-like substance from the end of my body. I used to offer it to a friend of mine, the black ant. In return for serving him this delicious honey meal, he defends me and my family against whoever tries to attack or eat us .



My cousins living in the neighbourhood aren't lucky enough to have these friendly ants. On the contrary, they have a bunch of quarrelsome neighbours. These are of a different species of ant and are brown in colour with a black belly. They are strong vicious ants who chase my caterpillar cousins and eat quite a few of them. Many of my family members living in this area are lost like this.



I've learned that in the coming years, the climate will get hotter. This will affect us greatly and many individuals may die because of the rise in temperature. Our wings are very delicate and don't allow us to fly for more than 100 meters. This means we are unable to fly to higher points where the temperature is lower. Our friend the Thyme also suffers, unlike our wild bee friends and Thyme living in the higher areas on mountain summits. The temperature there is lower and the weather is milder, so their chance of survival is much higher than ours.



There is something else affecting our survival. Bedouin women and girls bring their sheep and goats to graze in the deserts and wadis where wild plants grow. Because Thyme isn't poisonous and has no spines, the goats love it and come to eat large amounts everyday. It is an old Bedouin custom that women bring with them all the tribe's goats to graze, and this custom has been followed for centuries.

We have another problem with humans. They pick the Thyme in large amounts, then pack it in bags and dry it, to be boiled and drunk like tea. They think that it cures stomach-aches and other illnesses. Now, some medical companies interested in extracting medicines from wild plants have started to collect Thyme in huge amounts, to test it and produce medicines.



Helf is an agreement between Bedouin tribes to forbid collecting wild plants for a certain period of time, by closing some places and wadis until they are healthy again.

I really hope that they will work according to Helf once again, especially as goats can feed on other crops like corn or barley.

Using wild herbs in curing human diseases is an old Bedouin tradition too. That is why they used to pick many kinds of wild herbs, among them the Thyme. The Bedouin tribes discovered that some plants were starting to disappear, and that their important Thyme was one of them.

So they assembled to discuss this problem, and they came to an agreement known as Helf.



Lately, St Katherine rangers surrounded the Safsafa area in Mount Sinai with a wire fence. It is one of the most important areas in which my family and I live. This fence prevents man from collecting the Thyme and goats from grazing on it. This helps it to flourish, and we can now find enough food. We hope the protected areas will increase to safeguard all my relatives in this limited region.



Mohamed

Tamer

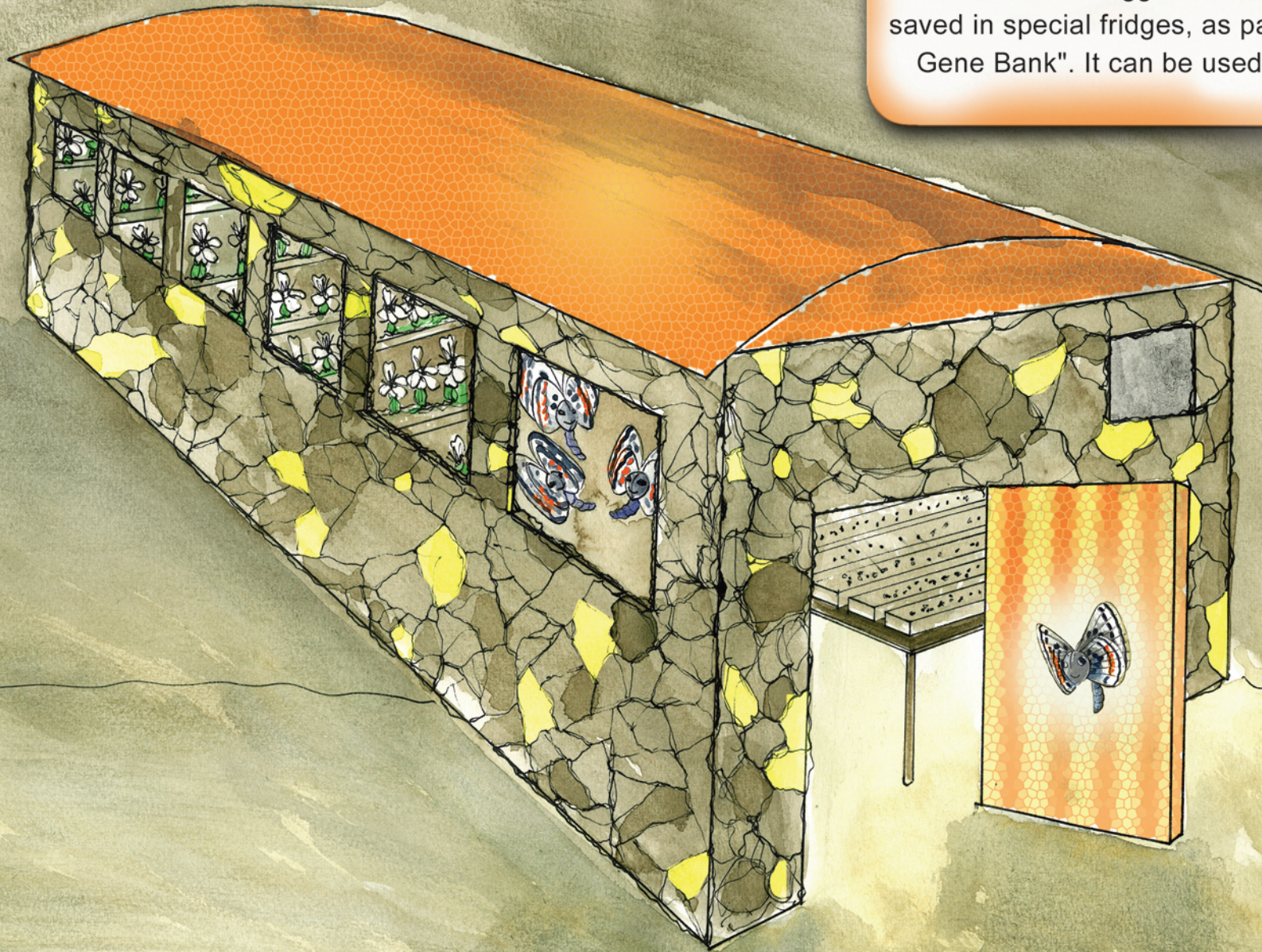
Hemaid

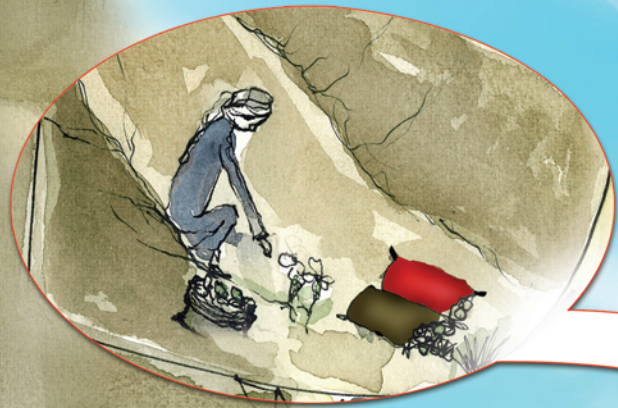
Shaker

Ayman

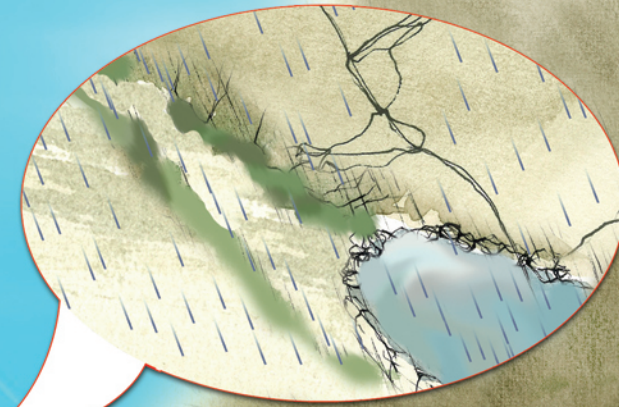


The other day, I was with my other animal friends, and they told me that man can build what is known as "greenhouses" and special places for breeding us. They can plant the Thyme in rooms with controlled temperature in these places. Thyme seeds and some eggs from my sisters can be collected and saved in special fridges, as part of a project called "Seed or Gene Bank". It can be used in case we become extinct.





Now I have narrated my story, and told you about the problems that the few remaining individuals of my species and I face. Scientists have proved that if the situation remains as it is, we won't exist on earth for more than 200 years. We will disappear forever.



Tomorrow, I will wake up in the early morning to watch the sunrise from the top of the blessed Mount Sinai. I will ask God to help us solve problems of over-grazing, and collection of the Thyme. I will also ask Him to send us rain, and to decrease the temperature. I hope that my wishes come true, and I hope that everyone who reads my story and believes in it will help me before I disappear completely from our home on Planet Earth.



Extra information

- The butterfly's life cycle takes one year.
 - The butterfly lives for nearly 2 to 3 months; it feeds on thyme nectar, mates, lays eggs, and then dies.
 - The eggs hatch within days to give little caterpillars.
 - Caterpillars live for a short time; between 1 and 2 months. They feed on Thyme petals, becoming very active by the end of this phase. A caterpillar eats avidly, moves to live in the soil next to Thyme roots, and then weaves a brown cocoon to become a pupa.
 - The Pupa is the dormant phase. and It stays dormant inside its cocoon for nearly 9 to 10 months. It then hatches by the end of spring or early summer to give a beautiful butterfly to repeat the cycle.
- The butterfly leaves the brown cocoon behind. Microorganisms like bacteria turn it into useful substances, providing Thyme roots with essential elements for its growth.
- Thyme is vital for the life of the butterfly, since it provides all its food throughout its life cycle. In its turn, the butterfly, together with wild bees, helps the Thyme in transferring pollen grains to the female part of the plant to produce seeds which

Information about St Katherine

- St Katherine is famous for the presence of the St Katherine monastery which is one of the oldest monasteries in the world dating back to 526 AD. About 1000 tourists visit it every day.
- It is inhabited by groups of Bedouin belonging to the Gebalia tribe, meaning "mountain people". They are centered in the town of St Katherine, and the surrounding wadis. They take their herds of goats every day to graze which is essential for feeding their goats, and is a part of their traditions and customs.
- For hundreds of years, the Bedouin have used wild plants as a means of curing different diseases.
- The Bedouin have rules to regulate their lives and their interrelations as well as with the surrounding environment. Among these is a rule known as Helf. It is an agreement for protecting certain areas from grazing and plant collection for a certain period. This is to give plants and animals a chance to recover.
- In 1996, The Ministry of State for Environmental Affairs established St Katherine as a Protected Area, for its rare animals and plants and for its historical and cultural heritage.
- The rangers of the protected area keep an eye on the lives of the living organisms in the region, and work at protecting the historical and cultural heritage .



Problems the butterfly faces, and suggested solutions:

- The first problem is global warming and the increase in temperature. Egypt will be affected, especially the Delta region. A wide range of the coastal strip in the Delta will be submerged by the rising sea level. Man and animals will be affected by these changes, as well as the organisms inhabiting mountains, such as the Sinai Baton Blue Butterfly.
- Since the butterfly is tiny, and has fragile wings, it cannot fly for more than 100 m. Therefore it will be strongly affected by this change in climate.
- The second problem is the continual grazing on Thyme by taking goats and sheep to graze on wild plants. This puts the continued existence of this plant under threat, and consequently endangers the lives of animals and insects depending on it for their survival.
- Special areas can be planted for grazing, or alternative crops like corn, barley or other types of fodder can be offered to the sheep and goats.
- The third problem is random plant collection for man's medical use. Plant collection should be regulated, and there should be special farms for these plants, to produce sufficient amounts of Thyme for human needs. This can be done with the help of modern technology.
- Field studies on the butterfly have proved that if the increase in temperature continues, as well as the grazing and collection of Thyme, the butterfly won't survive for more than 200 years. It will totally disappear from Planet Earth, and we will have lost this rare creature.



1. What are the three main colours of the butterfly?
2. What is the butterfly's approximate body length?
3. What is the title the butterfly is competing to get?
4. Does the butterfly live in other parts of the world other than Egypt?
5. Where does she live in Egypt?
6. On what plant does the butterfly feed? And what does she get from it?
7. What is the colour of the butterfly's friend, the ant?
8. What is the colour of the butterfly's enemy, the ant?
9. What is Helf?
10. When was St Katherine Protected Area established?
11. Where did the butterfly watch the sunrise from?



Wildlife in Egypt is beautiful, but endangered.
We need to work together to preserve it.



Game.

G	R	E	E	N	H	O	U	S	E	M
M	E	G	G	N	E	C	T	A	R	O
O	B	U	T	T	E	R	F	L	Y	N
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T	M	I	L	D	A	A	Y	H	C	T
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I	S	I	N	A	I	E	E	L	O	R
N	B	E	D	O	U	I	N	F	N	Y
S	T	K	A	T	H	E	R	I	N	E

Shade the words ,
to find out the secret word :

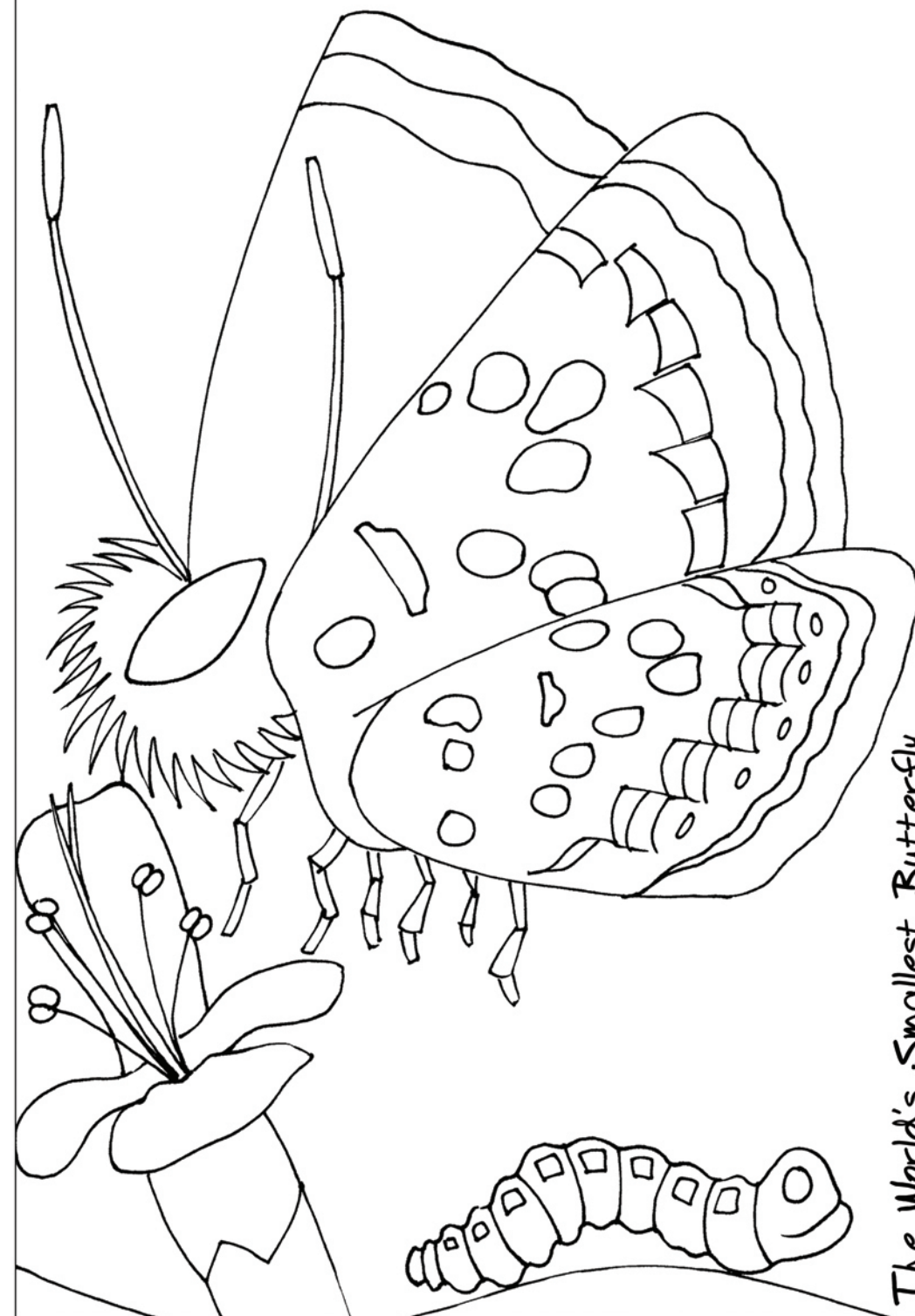
- ST KATHERINE - MONASTRY - COCOON
- GREENHOUSE - ALHEL - BEDOUIN
- MOUNTAIN - YEAR - PUPA - GRAZE
- SINAI - THYME - NECTAR - EGG - MILD
- ANT - GOAT

Password:



Coming Soon
«The Egyptian Degla»

Sinai Baton Blue Butterfly



The World's Smallest Butterfly

