





© EAS, 2009  
Original title: Cuentos de estrellas  
Translation into English: Chris  
Gladwin, Alina Hirschmann

First edition: March 2009

© CSIC, 2008

© Texts: Naoufel Ben Maaouia,  
Antonio Bernal, Paola Caponni,  
Marcos Carías, Antonio Claret,  
Jorge Colorado, Julieta Fierro, Max  
Finger, Sergio López, Abdelkader  
Oueslati, M. Cristina Pineda de  
Carías, Germán Puerta, Llorenç  
Puig, 2008

© Astronomy texts: Rosa Mª Ros,  
2008

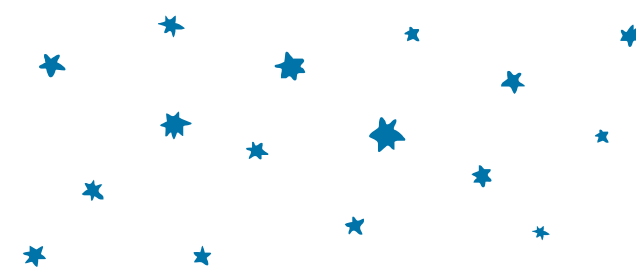
© Illustrations: Maria Vidal, 2008

Edition: Rosa Mª Ros  
Proofreading: Sergio López,  
George Miley, Cristina Padilla,  
Carolina Ödman, Germán Puerta,  
Rosa Mª Ros

Graphic design: Maria Vidal

Legal deposit number:  
Printed in the EU  
ISBN:

# tales of the stars



Naoufel Ben Maaouia  
Antonio Bernal  
Paola Caponni  
Marcos Carías  
Antonio Claret  
Jorge Colorado  
Julieta Fierro  
Max Finger  
Sergio López Borgoñoz  
Abdelkader Oueslati  
M. Cristina Pineda de  
Carías  
Germán Puerta  
Llorenç Puig  
Rosa Mª Ros

edition  
Rosa Mª Ros

translation  
Chris Gladwin, Alina  
Hirschmann

illustrations  
Maria Vidal

European Astronomical Society , 2009



Universe Awareness (UNAWE) is an international initiative aimed at inspiring young underprivileged children with the scale and beauty of the universe. Goals of UNAWE are to broaden young children's minds, awaken their curiosity in science and stimulate a feeling of world citizenship at an age when their value system is being formed. It is hoped that through a journey of discovery of the universe, they will become aware of our place in it and of our common destiny among the stars.



The Spanish National Research Council (CSIC) is involved with UNAWE – *Explora el Universo*, Universe Awareness in Spanish. CSIC support makes UNAWE resources available to children from Spanish-speaking countries throughout the world.



The European Astronomical Society was founded in 1990. The purpose of the society is to contribute to and promote the advancement of astronomy, in its broadest sense, in Europe, by all suitable means and in particular: a) by providing an independent forum for the discussion of subjects of common interest b) by providing means whereby action can be taken on those matters which appear desirable to be handled at the European level.



The International Year of Astronomy (AIA-IYA2009) is a worldwide celebration of astronomy and its contributions to society, to culture and human development. AIA-IYA2009 is a unique opportunity to convey the excitement of discovery, the satisfaction of sharing knowledge about the Universe and the importance of scientific culture to all children of the world.

Where did the idea for this book come from?

Many children around the planet share Spanish as a common language. Spanish has been a meeting point for many cultures down through the centuries. These children have a common unifying cultural heritage but many also come from native cultures with particularities that enrich them. It is good for them to know the stories that stirred the imaginations of their ancestors. It is also good for children to know the stories of the ancestors of other children like themselves, now written in their common language to make them understandable. So why not collect some of these tales in a book for the children of today? This book is the result of making this idea a reality.

With support from Universe Awareness international and the European Astronomical Society, the cultural and scientific heritage shared in this book is now available in English.

How did the book come together?

I wanted to collect tales of our grandparents in a book for everyone, in a book with many voices where each culture would be represented by an author from the region and with tales from Greek and Roman mythology, from Arabic legends, from the marvellous Mayan and Aztec traditions. Indeed, all the peoples of the Earth have tried to explain the marvels of the skies.

It was a challenging task! Where should I start? There was no doubt in my mind that the best solution was to call upon my friends, my astronomer friends from all over the world. And so the authors who appear in the book come from Honduras, Colombia, Mexico, Brazil, Italy, El Salvador, Tunisia and Spain. Thanks to this group of volunteers, we were able to collect indigenous tales from the Andean plateau, from the Amazon basin, from the traditions of the Inca peoples, the Mexicas, the Cubeos, Mayas and Aztecs, from the Arabic legends, from Christian tradition and Greek and Roman mythology. Obviously we have not managed to include every culture nor all the stories so there is plenty of room for more books.

Children from all over the world, enjoy your reading! We, the authors, had a great time writing. It was wonderful for all of us to feel like children again. We hope our own experience and fascination for the sky is conveyed in these pages. These stories are not just tales; they are the heritage of our ancestors.

Rosa M. Ros  
Book editor

# contents

<b>The Dream of the Gods</b> <i>Tale from the Andes plateau</i> <b>Germán Puerta Restrepo</b> .....	10
<b>The Legend of Yacana</b> <i>Based on Inca stories of the sky</i> <b>Antonio Claret</b> .....	12
<b>Orion the Giant</b> <i>Story from Greek Mythology</i> <b>Llorenç Puig Mayolas</b> .....	14
<b>The Sad Story of the Three Siblings</b> <i>Arab myth from the 10th century</i> <b>Abdelkader Oueslati - Naoufel Ben Maaouia</b> .....	16
<b>The Tale of the Seven Stars</b> <i>Based on a Kaxinawá legend (Brazil)</i> <b>Antonio Claret dos Santos</b> .....	18
<b>Hercules, the Strongest and Bravest Boy of All</b> <i>Based on Greek and Roman Mythology</i> <b>Paola Capponi</b> .....	20
<b>The Eyes of Saint Lucia</b> <i>Christian tradition from Central America</i> <b>Jorge Arturo Colorado</b> .....	22
<b>Algol, the Demon of the Sky</b> <i>Based on an Arab legend</i> <b>Max Finger Bou - Sergio López Borgoñoz</b> .....	24
<b>Tales of Wandering Stars</b> <i>Inca Mythology</i> <b>Germán Puerta Restrepo</b> .....	26
<b>The Sun and the Moon</b> <i>Based on Quiche Indian stories from Guatemala</i> <b>Marcos Carías - María Cristina Pineda de Carías</b> .....	28
<b>A Rabbit in a Pot</b> <i>A Mexica Legend</i> <b>Julieta Fierro Gossman</b> .....	30
<b>The Moon's Shame</b> <i>Cubeo Indian Legend from the Amazon</i> <b>Antonio Bernal González</b> .....	32
<b>The Birth of Venus</b> <i>Traditional Aztec story</i> <b>Marcos Carías</b> .....	34



# The Dream of the Gods

*(El sueño de los dioses)*

Tale from the Andes plateau

Germán Puerta Restrepo

A long time ago, before the beginning of the world, there was only one person. Her name was Bague and she was old like a great grandmother. Once, Bague let out a loud scream and all the gods, the light, the plants, the animals and the Muisca people appeared.

Later, the gods took a pot and filled it with seeds and stones. They went on long journeys through empty space to plant the planets and the stars. Then they took the crumbs that were left in the pot and threw them as high up as they could. This formed the Milky Way and the tiny dim stars we can barely see in the sky.

The world was beautiful but everything was still and nothing moved. So the gods decided to go and visit Bague, the great grandmother, and tell her what they had seen. They told her about the stars, the rivers, the animals with fur, the animals with feathers and the animals with scales. They told her how sad they felt that nothing moved, nothing made any noise and nothing grew.

Great grandmother Bague prepared a magic potion for the gods and they drank it until they fell asleep. The gods started having visions in their sleep. One saw a

tiger jumping on a deer. Another saw gigantic trees shaking their branches and full of chirping and singing birds. Another heard the sound of rivers and waterfalls. Another dreamt that the Sun appeared on the horizon, and another thought about the Moon and saw shooting stars.

The gods saw everything in their dreams and they dreamt of the Muisca people, going about their daily work. When the gods woke up, light spread its golden rays and the animals, the rivers and the trees started to move. The Sun, the Moon and the stars began to rotate. Such was the beauty of the first day.

## Cosmology

About 14 billion years ago, the whole Universe that we can see today was only a few millimetres across. It was then extremely hot and dense and began to expand, a process that is called the "Big Bang". After a few billion years tiny lumps in the Universe grew into the first stars and galaxies. Then our star, the Sun, with its planets was born. Much later, plants and animals and eventually human beings appeared on the Earth.

The Sun is one of about 100 billion stars in the Milky Way, a galaxy that is shaped like a large and very beautiful spiral. The Sun and its planets are situated close to the edge of the Milky Way and revolve around its centre.





# The Legend of Yacana

*(La leyenda de Yacana)*

Based on Inca stories of the sky

Antonio Claret

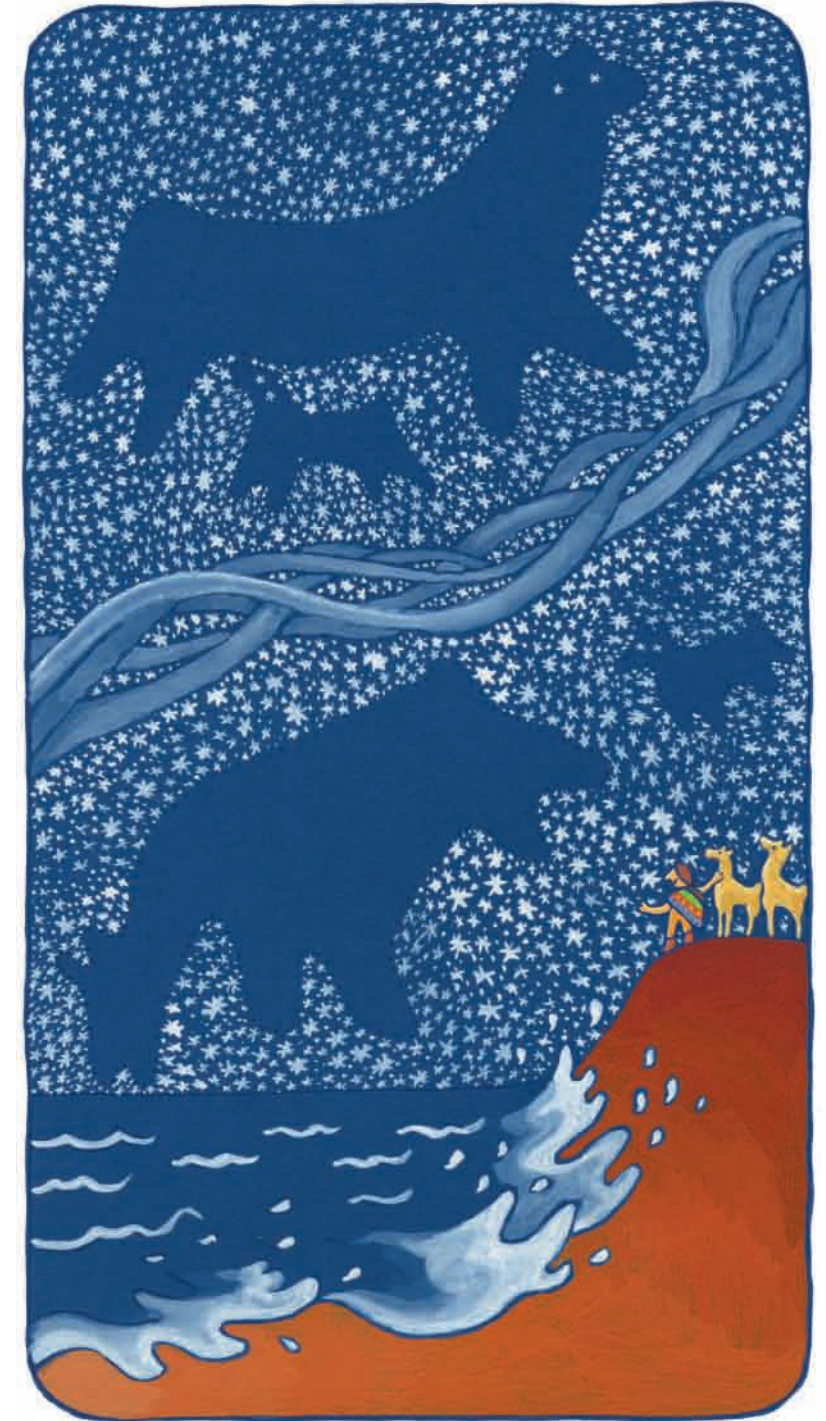
The llama is one of the most important animals for the Incas. Its silhouette appears in the dark areas between the stars. For this reason llamas with black fur were very important in the Inca religion. Two very bright stars in the constellation of Centauri (alpha and beta) represent the black Llama's eyes.

The Inca legend tells us that Yacana (the llama) was wandering with her baby along a river that crossed the entire sky (the Milky Way). The more she walked, the blacker she got. Her baby accompanied her throughout the sky. When the baby became hungry, Yacana fed it. When Yacana woke up, it became daytime. It is said that the man who finds himself in a place where Yacana has fed her baby will have good luck for the rest of his days.

But Yacana was just and treated everyone equally. She would not give happiness merely to one man or one woman. At night, when nobody was looking, she used to go and drink water from the oceans. She drank the water of pain, the water of sadness, the water of thirst and hunger. She drank the water of the tragedy of humankind and prevented the seas from overflowing and flooding the earth.

## Interstellar Clouds of Dust and Gas

To find our way in the sky, it is convenient to imagine that the stars can be joined together to form figures and shapes representing people and animals. These figures are constellations. In contrast to other civilizations, the inhabitants of South America saw figures in the shapes of the dark spaces between the stars of the Milky Way, which they could see clearly. These dark regions in the sky are in fact enormous clouds of dust that absorb the light coming from the stars behind them.





# Orion the Giant *(El gigante Orion)*

Story from Greek Mythology

Llorenç Puig Mayolas

A long time ago, a giant named Orion lived in Greece. He spent his life hunting with his dogs. He lived in a large cave close to another cave where a giant named Atlante lived with his wife and his seven daughters, the Pleiades.

One day Orion saw Merope, one of the Pleiades. She was sunbathing. Orion was overwhelmed by Merope's beauty and fell in love with her. Merope saw him and fell in love too. But Atlante had other plans for Merope. He planned to marry her to the son of a very rich giant who lived far away in another forest.

One day Atlante saw Orion and Merope out walking together and their love made him furious. He prepared a potion that he gave Orion. Atlante wanted to make Orion blind so that he could not see Merope anymore. Orion drank the mixture and lost his sight. Atlante told him "You will not recover your sight until you find the light of dawn. Walk until you find it. Then, when you return, you will have to fight all of the animals you meet on the way."

The blind Orion could not travel alone so he sought the help of a young boy. Perched on Orion's shoulders, the boy led him East until they found beautiful colours of the light of dawn. Then Orion was able to see again.

On the journey home, Orion confronted a hare and a bull. He defeated both, but when he was close to his cave a scorpion stung him in the foot and left its poisonous sting stuck in his skin. Feeling that he was going to die, Orion asked Zeus, the father of all gods, to transform him into a constellation of stars so he could see his beloved Merope. Zeus kindly fulfilled Orion's wish. When Merope found out, she and her sisters asked to be close to Orion. Zeus obliged and turned them into stars too. He did the same to Orion's dogs and the animals that had crossed the giant's path on the way back from the seeking the light of dawn.

Since that time, on calm winter nights, it is possible to see Orion with his drawn bow, his two dogs, the rabbit and the bull. Close to them, the Pleiades watch the giant. What never appears in the night sky at the same time as Orion is the constellation of the Scorpion, Orion's enemy. When one is visible, the other is not. In the sky these eternal enemies will watch over us forever.

## Constellations

If we look at the sky at night, we can see as many as 6000 stars. To help people find their bearings our ancestors traced imaginary lines between stars to form shapes called constellations. Orion is one of them. Stars in Orion have different colours. Rigel (Orion's right foot) is a white-blue supergiant star and Betelgeuse (Orion's left shoulder) is a red supergiant almost at the end of its life.





# The Sad Story of the Three Siblings

*(La triste historia de los tres hermanos)*

Arab myth from the 10th century

Abdelkader Oueslati - Naoufel Ben Maaouia

A long time ago, there was a brother and two sisters travelling together across the sky. The younger sister was Gomeisa, a star in the constellation Canis Minor. The older sister was the dazzling Sirius, the bright star of the constellation Canis Major. Their young brother, Canopus, was a star named Souhail, which means “bright star” in Arabic.

The three of them were walking through the sky when Canopus saw Al Jaouza, known today as Orion. He was stunned by her beauty. They fell in love and decided to get married. Unfortunately they had terrible bad luck on their wedding day. Canopus accidentally hit his bride and she fell, broke her back and died.

Canopus was so sad and ashamed of what had happened that he fled. He ran away to a place where nobody would know him so that he could forget what had happened. He travelled south, crossing a light blue river. The river is represented by the Milky Way. Canopus left his two sisters on the other side.

Sirius also decided to cross the river to join her brother in the southern skies. Now the two sisters are on different sides of the Milky Way and Gomeisa was left alone grieving over the separation from her brother and sister. Her sorrow dimmed her eyes and she now shines less brightly in the sky.

## Stars $\alpha$ , $\beta$ , $\gamma$ , ...

Stars are grouped into constellations according to their apparent proximity in the sky. Originally each star had its own name. As astronomers observed and catalogued an increasing number of stars, the ways of naming stars changed. Stars were identified with a Greek letter followed by the name of its constellation. In each constellation, stars are named  $\alpha$ ,  $\beta$ ,  $\gamma$  and so on, in order of decreasing brightness. So, for example, Sirius is the  $\alpha$  star in Canis Major because it is the brightest star in the constellation. Canopus, the second brightest star in the sky, is designated  $\alpha$  Carinae. Gomeisa was originally the brightest star in Canis Minor but has become dimmer. It is therefore now the  $\beta$  star in Canis Minor. Is that the reason for this sad story?





# The Tale of the Seven Stars

*(La historia de las siete estrellas)*

Based on a Kaxinawá legend (Brazil)

Antonio Claret dos Santos

There once was an Indian woman who lived in the Amazon rainforest with her seven small children. The mother did not look after her children properly and it was their grandmother who really took care of them. She used to feed them, keep them warm and hug them tight when they were sick.

But then the grandmother died and the children were left helpless. The oldest child had to go out and look for honey and fruits to feed his brothers and sisters, but sometimes, because he was so young, he would come home empty-handed. And when the seven children cried because they were hungry, their mother did not bother very much and fed them whatever she could find.

The children became weaker and weaker and then one of them said: "Why don't we go up into the sky? We will be able to find plenty of honey and fruit there, and we will never be hungry again."

A hummingbird that was flying by overheard their cries of distress. He felt so sorry for the children that he called the winds to help him carry them away up into the sky. Their mother, who was sleeping, woke up and desperately tried to

stop her children from leaving. But it was too late. The children climbed higher and higher until they reached the heavens and were transformed into seven little stars.

When the Indians discovered them in the skies, they called them Eixu, which means seven stars in Guaraní.

## Open star clusters

The seven stars mentioned in this legend are the Pleiades, an open star cluster located in the constellation Taurus. Some stars seem very close to each other. This is often an illusion because they can be at very different distances. However, when stars are born more or less at the same time and are bound together by gravity, these stars are classified as a cluster. Clusters are very useful because astrophysicists can determine their ages, chemical compositions and distances.





# Hercules, the Strongest and Bravest Boy of All

*(Hercules, el niño mas fuerte y valiente)*

Based on Greek and Roman Mythology

Paola Capponi



A long time ago, a little boy named Hercules was born. He was the son of Zeus, the king of the gods and ruler of Mount Olympus.

One day, while Zeus's wife, Hera, was feeding him, a little trickle of milk escaped into the sky. From these white milk drops, the Milky Way was formed. This is visible on dark nights as a whitish streak across the sky with tiny stars grouped close together.

Hera, who was really Hercules' stepmother, did not love him at all. When Hercules was still a baby in the crib, she sent two snakes to choke him. But Hercules, who was strong and brave, was able to kill them. However, Hera was not put off and set him traps and cause him all sorts of trouble for the rest of his life.

Hercules had to face the most dangerous challenges. He confronted ferocious animals like the lion and the Hydra, a monster with many heads that grew back when they were chopped off. He also had to fight eagles with bronze beaks and

claws. And he defeated a deer with golden antlers and copper hooves. There wasn't a single task or test that was too much for Hercules. He became stronger and braver every day until he was finally accepted amongst the gods on Mount Olympus.

At night, the constellations of Hercules, the Hydra and the Lion shine high in the sky and remind us of the courage of the son of Zeus.

## Globular Clusters

The most famous object in the constellation of Hercules is the globular cluster M13. Such clusters contain thousands of stars that form a giant sphere or globe. This is why they are called globular. M13 contains mostly old stars. Globular clusters may be thought of as stellar cemeteries, in contrast to the open clusters that are formed by thousands of newly formed and young stars.



# The Eyes of Saint Lucia

*(Los ojos de Santa Lucia)*

Christian tradition from Central America

Jorge Arturo Colorado

Lucia was a young Christian girl who lived in Italy at the time of the Roman Empire. When she was about to get married, her would-be husband denounced her for her religion, because in return for her mother's good health she made a promise to God to keep her virginity and had to cancel their wedding.

The Roman emperor, who persecuted Christians, ordered her arrest and finally condemned her to death because she would not abandon her faith. It is said that her eyes were poked out during her martyrdom, but Lucia miraculously continued seeing. Finally, her throat was slashed with a sword and she died.

In the Christian tradition she is the patron saint of eye doctors and the blind. But the tradition goes further and there are two stars in the constellation of Taurus known as Lucia's eyes. They form the Theta Tauri system, a system made up of two stars that can be easily distinguished from each other with the naked eye.

The feast day of Saint Lucia is on December 13th. Around this time Theta Tauri reaches its maximum height above the horizon. In Central America, Saint Lucia's eyes are almost above our heads at midnight. From there comes the oral

tradition so suggestively expressed in a prayer to Saint Lucia: "Saint Lucia, high in the sky, please ask God to send us his light so that we can always see what we must do, say and avoid."

## Binary Systems

Within the constellation of Taurus there is a binary system, a system of two stars that revolve around each other. Both stars, Theta 1 and Theta 2, are at a distance of about 150 light years from our solar system. They belong to the Hyades open cluster. Theta Tauri 1 is an orange K-type supergiant, not as hot as our Sun. Theta Tauri 2 is a pulsating star (type Delta Scuti) and so its brightness varies constantly.





# Algol, the Demon of the Sky *(Algol, el demonio del cielo)*

Based on an Arab legend

Max Finger Bou - Sergio López Borgoñoz

Mohamed was wandering through the desert under the blazing sun, collecting stones, watching the lizards and contemplating the colours of the sand, scrambling up and down the dunes. It was really hot and Mohamed was sweating. It was also rather late and his family was beginning to worry about him. But Mohamed loved to wander in the desert whenever he felt like it. He used

to get really bored doing the same things over and over again.

He walked and walked until he came to an oasis with a big pool and lots of palm trees. He decided to lie down close to the water and rest. Then Mohamed fell asleep and when he woke up it was already dark. The little boy contemplated the stars, which his

grandfather had told him about. Mohamed knew the sky well and could name many stars.

His favourite was Algol. This star seems to be alive because sometimes it is really bright and sometimes really faint. At that moment it was shining brightly in the sky and Mohamed imagined that

Algol was wandering through the sky just like he was wandering through the desert. He also thought that this star might not like doing the same things over and over again either.

He knew that people call this star the Demon. They are afraid of it because it varies in brightness, because it is different. But Mohamed did not feel afraid. His grandfather had told him that Algol, the Demon, was a young and impulsive star, just like Mohamed. Mohamed waved to Algol, got up and went home. He wanted to be with his family. When he reached home, his mother scolded him, kissed him and then gave him food and water. His grandfather hugged him and smiled saying: "Oh, my little Algol! My little demon!"

## Variable Stars

There are stars in the sky that vary in brightness. There can be many reasons for this: processes taking place inside the star during its lifetime or around it. The latter is the case of Algol, an eclipsing binary star. In fact, Algol is a system of two stars that revolve around each other. When one star passes in front of the other, eclipsing it, the overall brightness of the system diminishes. This system has the particularity that the two stars exchange matter, a characteristic that makes this "demon" very interesting for astronomers.



# Tales of Wandering Stars

*(Historias de estrellas errantes)*

Inca Mythology

Germán Puerta Restrepo

It is said that the sky has many secrets and that our dreams and worries are represented by the stars.

There are five wandering stars called the Pichcaconqui. One of them is very bright, the brightest of all. It sometimes appears at dawn and sometimes at dusk. This star is called Chasca, which means wild-haired, since she has the tousled looks of the prettiest of women.

There is another very bright star and his name is Pirua. He is believed to be the guardian of the Empire and all its possessions. Perhaps this is because he barely moves and looks as if he were always keeping watch.

The little star that accompanies the Sun is called Catuilla. He protects traders, walkers and voyagers. Maybe this is because the Sun is associated with gold and commerce.

Haucha is the slowest star. When he is really bright he causes famine, sickness, thunder and lightning. This must be because of the suspicious way he moves so slowly.

People really start to worry when the red star, Aucayoc, appears in the sky because it is then that wars and soldiers come.

They think this because they say the colour of the star has nothing good about it.

It is also said that the Maker of everything put a princess in the sky with a jug full of water to pour over the world. The princess's brother, who also inhabits the sky, carries a catapult and a club. He sometimes breaks the jug and this causes thunder and lightning. So they say, this is because men are fierce and women are tender. The princess is said to make the rain, the hail and the snow.

An Inca poet is believed to have written these stories.

## Planets

The Solar System is formed by the planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, and the star they all go around: the Sun.

In ancient times, man observed how some of them moved against the stars in the background. This is why they were called "wandering stars". The five brightest planets were known then: Mercury, closest to the Sun, Venus, the star of dawn and dusk (because it was the first object to be seen in the sky at dusk and the last to disappear at dawn), Mars with its reddish colour, Jupiter, the brightest of all, and Saturn, the slowest.





# The Sun and the Moon

*(El Sol y la Luna)*

Based on Quiche Indian stories from Guatemala

Marcos Carías - María Cristina Pineda de Carías

So the two brothers, Hunahpú and Ixbalanqué, set out on their journey. They started late because the message had come late: "Tell them to come at once! Tell them to stop playing ball games!" said the Lords of Xibalbá to the boys' grandmother at the time when everything was in darkness.

Their grandmother chose a louse to carry the message to the boys. The louse was eaten by a frog, the frog was eaten by a snake and the snake by a hawk. When the hawk reached the place where brothers were, he threw up the snake, which threw up the frog, which threw up the louse, which finally threw up the message.

Hunahpú and Ixbalanqué reached the Lords of Xibalbá. Although there appeared to be many, only nine of them were real because the others were made of wood. So the brothers let out the mosquito. When the mosquito bit the wooden men, they said nothing, but when the mosquito bit the Lords, they said "Ouch". That is how they discovered the real Lords of Xibalbá and were not fooled by them. The brothers were tested in the house of darkness, the house of cold, the house of the tigers, the house of fire and the house of bats. They had to face many challenges

before finally defeating the Lords of Xibalbá in a ball game.

After defeating the Lords of Xibalbá, the two brothers ascended into the sky. Hunahpú was converted into the Sun and Ixbalanqué into the Moon. So there was light and no more darkness.

And there they are in the sky, Hunahpú and Ixbalanqué, shining down on us. The Sun and the Moon. Then the men who inhabit the Quiche lands appeared. And this is the way their grandparents told the story and their grandparents before them.

## The Sun and the Moon

Earth is the planet we live on. It has one natural satellite called the Moon, which revolves around it. The Earth goes around the Sun, the star which is our main source of energy. Due to their size and small distance to Earth, the Moon and the Sun are the only celestial objects large enough to be seen in detail without the help of a telescope. This also makes them the brightest objects in the sky, while the rest of the stars and planets are only visible as small, bright dots.





# A Rabbit in a Pot

*(Un conejo dentro de una vasija)*

A Mexica Legend

Julietta Fierro Gossman

If you look at the Moon every night, you will see how it changes shape. Sometimes it looks round like a plate and sometimes it looks like a segment of an orange or a smile. The Moon has a night side and a day side, just like the Earth. The phases of the Moon are caused by changes in the light and darkness.

Five hundred years ago, the Mexicas lived in the region now known as Mexico. Their gods represented what they considered important: the rain, the Sun and the Moon. The Mexicas had founded their empire long before the Spaniards arrived in America. They thought that the Moon, which they called Coyolxauhqui, was a god who lived inside a pot and lit up the Earth depending on his position in the pot.

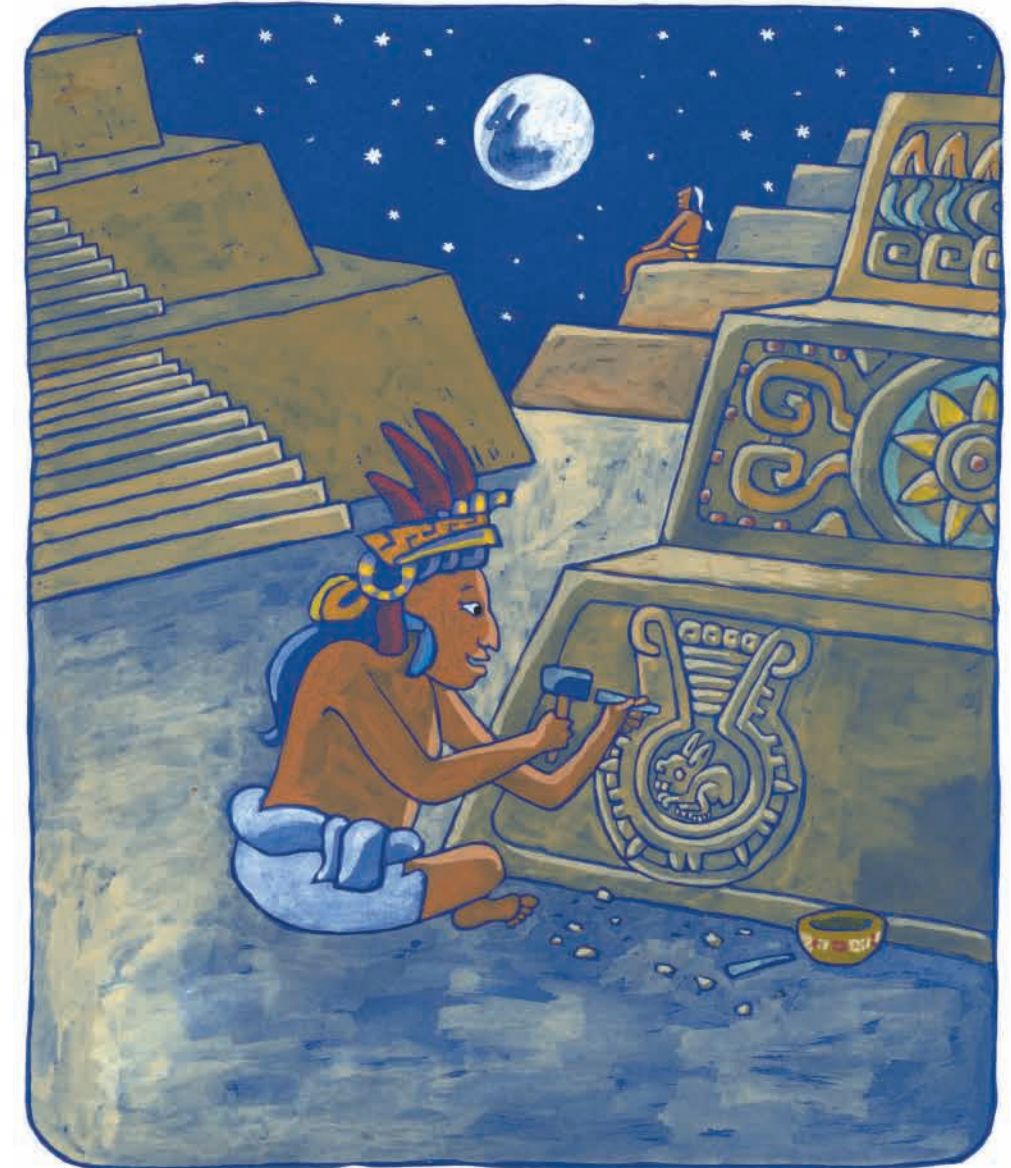
Some parts of the Moon are brighter than others. For the Mexicas the dark areas resembled a rabbit. And what's more, they thought the rabbit lived inside a white pot.

The Mexicas reasoned that if the Moon and the stars are not visible during the day it was because Coyolxauhqui's brother, Huitzilopochtli, the rising Sun, killed them every dawn.

The Moon was so important for the Mexicas that the word "Mexico" means "belly button of the Moon" in Nahuatl, their native language. The present inhabitants of Mexico, who have emerged from the mixture of the Spanish and Mexica cultures, still admire the Moon for its beauty. If you carefully observe the dark regions of the Moon, you can see the rabbit.

## Phases of the Moon

In the course of a month, the Moon changes shape as it revolves around the Earth because the Sun shines on different portions of its surface. We can use a ball to show how the Sun illuminates the Moon and how the illuminated part changes. In the same way as the Moon is in the sky, hold the ball with one hand and stretch your arm out. When we see the entire sphere clearly, it is because we see the entire surface illuminated by the Sun. When we see only half of the sphere, we only see half of the surface illuminated by the Sun.





## The Moon's Shame *(La vergüenza de la Luna)*

Cubeo Indian Legend from the Amazon

Antonio Bernal González

Earth hung her hammock at dawn. She lay down. She liked to look at the imaginary animals created by the patterns of the leaves and branches of her palm roof. Suddenly, she felt a warm, strong hand caressing her cheeks. She couldn't identify the visitor in the half-light. She kept still. She stopped breathing for a moment.

"Who are you?" she asked, keeping calm, but whispering to keep in her breath. There was no reply, but now she felt another hand stroking her hair like her mother used to do when she was a child. She felt more confident and little by little she began to relax.

"Who are you?" she repeated.

Once again there was no answer, but she felt the gentle and warm caress of a body touching hers. Earth allowed this unknown lover to lie down with her in the hammock and then she fell asleep. The next morning her lover was gone and Earth felt sad. The next night she lay down in the hammock waiting anxiously. Her lover arrived and lay down beside her again without showing his face, without answering her question of "Who are you?" After several nights Earth decided it was time to find out who her lover was. She prepared a red dye with annatto and put

it under the hammock in a pan. That night she rubbed her hands with the dye and caressed her lover's face until it was completely covered. The next morning Earth searched for a dyed face amongst the young men in the tribe and discovered that her lover was her neighbour, the Moon. The Moon cried. He was ashamed to have been caught out with such a simple trick.

Since then he has only gazed at Earth from the door of his home in the sky. Sometimes he paints his face with annatto dye. He hides his body behind the door and only shows his reddish complexion. This is called an eclipse of the Moon.

### Eclipses of the Moon and Sun

When the Moon passes through the shadow of the Earth which hides the sunlight, this causes an eclipse of the Moon. This happens when the Sun, the Earth and the Moon form a line. The surface of the Moon becomes reddish because, when sunlight filters through the Earth's atmosphere, the atmosphere bends some colours of the sunlight more than others. The part that reaches the Moon is the red light. Solar eclipses occur when the Moon is situated between the Sun and Earth. The Moon can block out the Sun partially or totally. In order to observe a solar eclipse without damaging your eyes it is necessary to use special sunglasses. You must never look directly at the Sun.







## The Birth of Venus *(El nacimiento de Venus)*

Traditional Aztec story

Marcos Carías

The good god and creator Quetzalcoatl performed two miracles for human beings. First of all, he made corn so that human beings would have food, and secondly, he sent his son, Ce Acatl Topiltzin Quetzalcoatl (Our Prince One-Reed Feathered Serpent), to govern them.

There never was a better ruler and never did the people live so happily. However, all this made Tezcatlipoca and his followers very envious. Tezcatlipoca was the brother of the good god and creator Quetzalcoatl, although a very mean brother because all he ever did was send down calamities on the humans.

Topiltzin loved peace. Tezcatlipoca and his followers loved violence and war. They wanted war so that they could steal other people's possessions and take prisoners for slaves or kill them.

So Topiltzin's enemies tricked him. They mixed a potion into his cup of chocolate that made Topiltzin fall into a deep sleep. Once he was asleep they took his clothes off and poured liquor all over his body, from his head to his toes, to make him act and smell like a drunk.

Then, they went and told the inhabitants of Tollan that the good king wanted to receive them all the next morning. And when the inhabitants went to see their king, they found him drunk, talking nonsense and

stinking of alcohol. Everyone laughed at him.

The young Topiltzin had such a good heart that he was incapable of imagining that anyone could have tricked him. He thought he had misbehaved and blamed himself. He gave up his throne and abandoned the kingdom. His enemies had triumphed and there was no more happiness in the land.

Topiltzin reached the seashore. It was past dusk and already dark. The good god and creator, Quetzalcoatl, his father, decided to offer human beings a gleam of hope by sending Topiltzin up into the sky to become the evening star.

The young Topiltzin asked his father if he could also contemplate the Earth in the morning to cheer humans up with his light when they got up. The good god and creator agreed and made him into the morning star as well. As the young prince of the feathered serpent reached the sky, the celestial body now known as Venus was born.

### Dawn and dusk

Although we cannot see the Sun in the sky in the early morning or late evening, the sky itself does not become light or dark immediately. At daybreak the light gradually increases, while it decreases at nightfall. This occurs because, even though the Sun is below the horizon, its light shines on the atmosphere and the air spreads the light.



